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2005
AMENDMENTS
to the
Program of Studies: Career and Technology Studies
Junior and Senior High Schools

1. **Replace** Career and Technology Studies, page 4, with **revised** Career and Technology Studies, page 4.

2. **Replace** Career Transitions, pages 10, 11 and 23, with **revised** Career Transitions, pages 10, 11 and 23.

   Course withdrawal:
   - CTR3020: Organizational Leadership

3. **Replace** Communication Technology, pages 11 and 25, with **revised** Communication Technology, pages 11 and 25.

   Course withdrawal:
   - COM3010: Presentation & Communication 3

4. **Replace** Construction Technologies, pages 11, 17 to 21, and 27 to 30, with **revised** Construction Technologies, pages 11, 17 to 21, and 27 to 30.

   Prerequisite changes:
   - CON2010: Site Preparation
   - CON2020: Concrete Forming
   - CON2030: Alternative Foundations
   - CON2040: Framing Systems 1
   - CON2050: Roof Structures 1
   - CON2060: Exterior Finishing
   - CON2070: Electrical Systems
   - CON2080: Plumbing Systems
   - CON2090: Climate Control Systems
   - CON2100: Agri-structures
   - CON3010: Concrete Work
   - CON3020: Masonry Work
   - CON3030: Wall & Ceiling Finishing
   - CON3040: Stair Construction
   - CON3060: Doors & Trim
   - CON3070: Floorcovering

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5. **Replace** Cosmetology Studies, pages 9 to 44, with **revised** Cosmetology Studies, pages 9 to 44.

Prerequisite changes:

- Introductory:
  COS1040: Forming & Finishing 1
  COS1050: Permanent Waving 1
  COS1080: Theatrical Makeup 1
- Intermediate—all courses **except**:
  COS2010: Hair Graphics 2
  COS2130: Facials & Makeup 2
  COS2150: Manicuring 2
  COS2210: Sales and Service 1
- Advanced—**all** courses.

Note: The attached program of studies has been revised to include **all** prerequisite courses (not just the immediate prerequisites).

6. **Replace** Electro-Technologies, pages 11, 33 and 34, with **revised** Electro-Technologies, pages 11, 33 and 34.

Prerequisite changes:

- ELT3070: Digital Applications
- ELT3080: Microprocessors

7. **Replace** Information Processing, pages 20, 22, 23, 24, 33 and 35, with **revised** Information Processing, pages 20, 22, 23, 24, 33 and 35.

Clarification of prerequisite requirements:

- INF2050: Word Processing 2
- INF2090: Correspondence
- INF2100: Reports
- INF2110: Tables/Forms
- INF2120: Software Integration1
- INF3060: Word Processing 3
- INF3100: Specialization 1

8. **Replace** Management and Marketing, pages 9, 11, 16, 22 and 28, with **revised** Management and Marketing, pages 9, 11, 16, 22 and 28.

New courses:

- MAM1040: E-commerce 1
- MAM2110: E-commerce 2
- MAM3120: E-commerce 3

9. **Replace** Mechanics, pages 11, 21 and 22, with **revised** Mechanics, pages 11, 21 and 22.

Prerequisite changes:

- MEC1040: Engine Fundamentals is no longer a prerequisite to:
  - MEC2060: Ignition Systems
  - MEC2070: Emission Controls

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PROGRAM OUTCOMES

The program outcomes describe the basic competencies integrated throughout the CTS program.

Within an applied context relevant to personal goals, aptitudes and abilities; *the student* in CTS *will*:

- demonstrate the basic knowledge, skills and attitudes necessary for achievement and fulfillment in personal life
- develop an action plan that relates personal interests, abilities and aptitudes to career opportunities and requirements
- use technology effectively to link and apply appropriate tools, management and processes to produce a desired outcome
- develop basic competencies (employability skills), by:
  - selecting relevant, goal-related activities, ranking them in order of importance, allocating necessary time, and preparing and following schedules (managing learning)
  - linking theory and practice, using resources, tools, technology and processes responsibly and efficiently (managing resources)
  - applying effective and innovative decision-making and problem-solving strategies in the design, production, marketing and consumption of goods and services (problem solving and innovation)
  - demonstrating appropriate written and verbal skills, such as composition, summarization and presentation (communicating effectively)
  - participating as a team member by working cooperatively with others and contributing to the group with ideas, suggestions and effort (working with others)
  - maintaining high standards of ethics, diligence, attendance and punctuality, following safe procedures consistently, and recognizing and eliminating potential hazards (demonstrating responsibility).

PROGRAM ORGANIZATION

CURRICULUM STRUCTURE

Career and Technology Studies is organized into **strands** and **courses**.

Strands in CTS define competencies that help students:

- build daily living skills
- investigate career options
- use technology (managing, processes, tools) effectively and efficiently
- prepare for entry into the workplace and/or related post-secondary programs.

In general, strands relate to selected industry sectors offering positive occupational opportunities for students. Some occupational opportunities require further education after high school, and some allow direct entry into the workplace. Industry sectors encompass goods-producing industries, such as agriculture, manufacturing and construction; and service-producing industries, such as business, health, finance and insurance.

Courses are the building blocks for each strand. They define what a student is expected to know and be able to do (exit-level *competencies*). Courses also specify prerequisites. Recommendations for course parameters, such as instructional qualifications, facilities and equipment can be found in the guides to implementation.

The competencies a student must demonstrate to achieve success in a course are defined through *general outcomes*. Senior high school students who can demonstrate the general outcomes defined for a CTS course; i.e., who have the designated competencies, will qualify for 1 credit toward their high school diploma.

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Specific outcomes provide a more detailed framework for instruction. Within the context of the general outcomes, the specific outcomes further define the knowledge, skills and attitudes the student should acquire.

The following chart shows the 22 strands that comprise the CTS program and the number of 1-credit courses available in each strand.

Strand	No. of Courses
1. Agriculture	33
2. Career Transitions	30
3. Communication Technology	33
4. Community Health	31
5. Construction Technologies	46
6. Cosmetology Studies	58
7. Design Studies	31
8. Electro-Technologies	37
9. Energy and Mines	26
10. Enterprise and Innovation	8
11. Fabrication Studies	44
12. Fashion Studies	29
13. Financial Management	16
14. Foods	37
15. Forestry	21
16. Information Processing	53
17. Legal Studies	13
18. Logistics	12
19. Management and Marketing	23
20. Mechanics	54
21. Tourism Studies	24
22. Wildlife	17

LEVELS OF ACHIEVEMENT

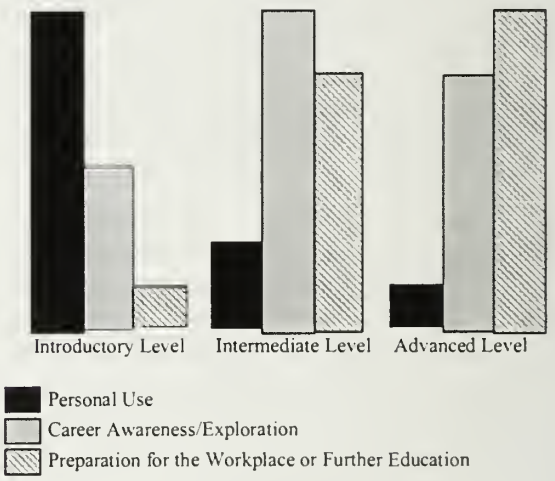
Courses are organized into three levels of achievement: **introductory**, **intermediate** and **advanced**. As students progress through the levels, they will be expected to meet higher standards and demonstrate an increased degree of competence, in both the program outcomes and the general outcomes defined for individual courses.

Introductory level courses help students build daily living skills and form the basis for further learning. Introductory courses are for students who have no previous experience in the strand.

Intermediate level courses build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

Advanced level courses refine expertise and help prepare students for entry into the workplace or a related post-secondary program.

The graph below illustrates the relative emphasis on the aspects of career planning at each of the levels.



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CAREER TRANSITIONS

B. STRAND RATIONALE AND PHILOSOPHY

Career Transitions, a strand in Career and Technology Studies, focuses on helping students recognize the relevance of schooling and to make a smooth transition from secondary school to the world of work or to further training and/or education. Key themes include Career Readiness, Leadership, Career Extensions, Career Credentials, Job Safety Skills, Client Service and Career Directions.

Career Transitions has the potential to create meaningful educational experiences for today's high school students. It supports integration across curricular areas and partnerships in which students, schools, businesses and the community can work together toward common goals.

Each Career Transitions course promotes the development of independent thinking and decision-making skills. As well, the courses encourage the abilities and flexibility required to adapt to new situations, including the pursuit of career advancement opportunities and changes in career paths. Career Transitions also helps students recognize the relevance, transferability and applicability of competencies they have developed in other courses and through hobbies, interests or work.

Students participating in Career Transitions are encouraged to set realistic career goals and to increase their motivation to succeed in courses that are related to these goals. Career Transitions helps students determine what employers and others expect of prospective employees, and encourages students to actively work to meet their own and others' expectations. Contact with role models in the work setting can provide accurate information about the training and pretraining requirements of occupations and the availability and use of up-to-date technology.

Within the philosophy of Career and Technology Studies, *students* in Career Transitions *will:*

- analyze the job market and societal trends, and relate them to personal career plans
- explore selected occupations in depth
- demonstrate successful job search, job acquisition and maintenance skills
- understand the concept of job termination
- develop acceptable work habits and positive attitudes toward work
- identify and discuss the expectations and the rights and responsibilities of employers and employees
- recognize and develop a positive attitude toward safety and safe workplace practices
- identify and understand legislation and regulations that govern employers and employees

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- understand the relationships among the individual worker, the employer, organized labour and the government
- demonstrate leadership in a governance role to affect change and decision-making processes
- explore the relationship between education, training and career advancement
- develop and demonstrate project management skills
- make a smooth transition between schooling and the world of work
- attain externally recognized credentials, where available
- develop a career portfolio, prepare learning/ career plans, including transition scenarios, and establish and implement action plans for strengthening their essential competencies (employability skills) and learning capacity.

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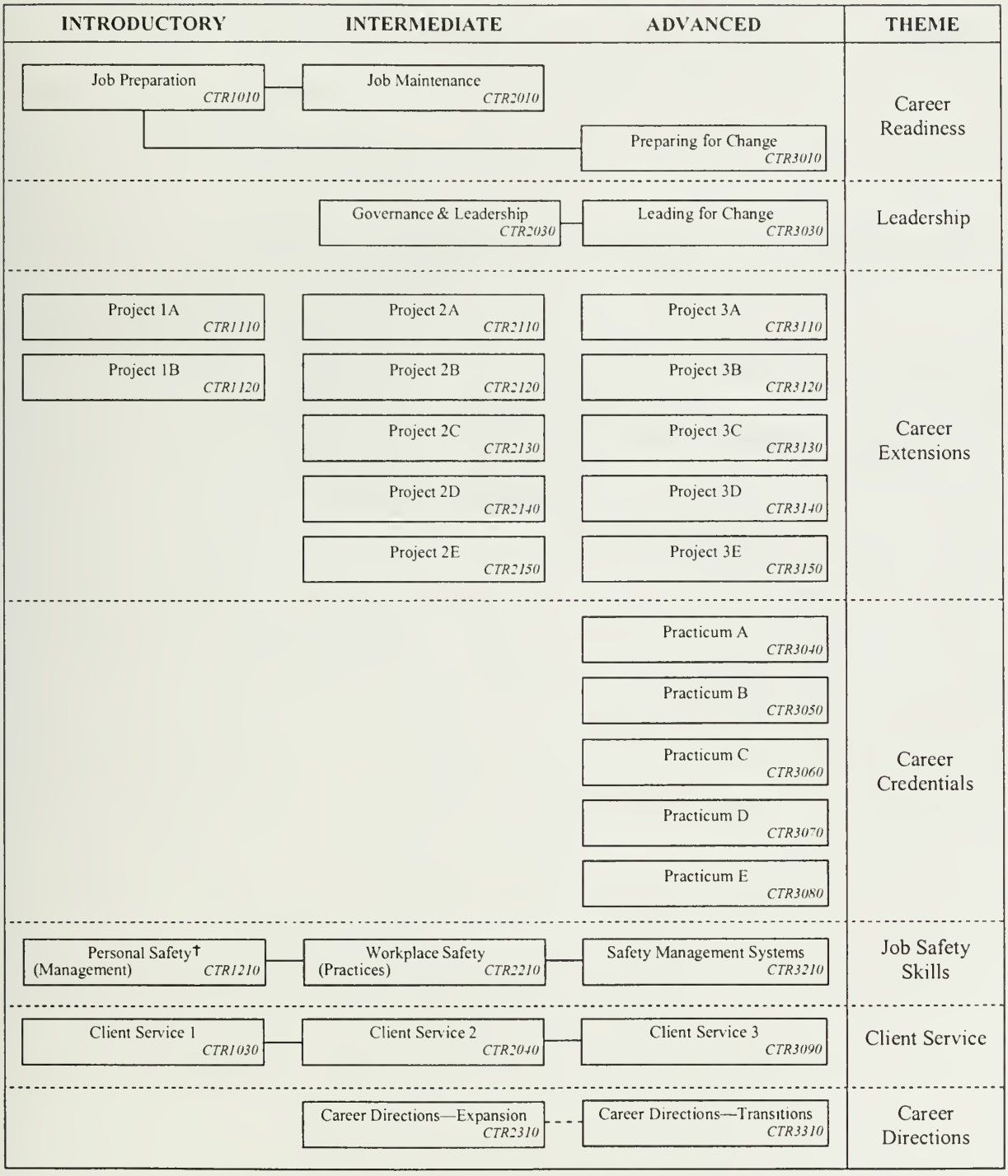
SCOPE AND SEQUENCE



——— Prerequisite - - - - - Recommended Sequence

† Course is also offered in Community Health.

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GENERAL OUTCOMES: ADVANCED LEVEL

COURSE CTR3010: PREPARING FOR CHANGE

Level: Advanced

Theme: Career Readiness

Prerequisite: CTR1010 Job Preparation

Description: Students develop knowledge and skills relating to the changing labour market, and relate these changes to analyzing and refining personal career plans.

General Outcomes: *The student will:*

- analyze the role of government and labour unions in relation to employers and employees
- gather and analyze appropriate labour market information related to selected occupations and incorporate the findings into a personal career plan
- demonstrate basic competencies.

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COURSE CTR3030: LEADING FOR CHANGE

Level: Advanced

Theme: Leadership

Prerequisite: CTR2030 Governance & Leadership

Description: Students investigate change and decision-making processes used in the school and/or community. They construct, propose and initiate the use of a project planning model to affect change.

General Outcomes: *The student will:*

- describe the change and decision-making processes used in a governance structure
- identify and record the organizational structures used in a school and in a community
- construct, propose and initiate the use of a project planning model
- demonstrate basic competencies.

COURSE CTR3040: PRACTICUM A
COURSE CTR3050: PRACTICUM B
COURSE CTR3060: PRACTICUM C
COURSE CTR3070: PRACTICUM D
COURSE CTR3080: PRACTICUM E

Level: Advanced

Theme: Career Credentials

Prerequisite: None

Description: Students, on the worksite, continue to develop and refine those competencies developed in related Career and Technology Studies courses, previous practicums and other experiences.

Note: The practicum courses may be accessed only by students continuing to work towards attaining a recognized credential offered by an agency external to the school. Practicum courses extend the competencies developed in related CTS strands. The practicum courses may not be delivered as stand-alone courses, nor may they be combined with core courses. These courses may not be used in conjunction with Registered Apprenticeship Program courses. The practicum courses must be delivered off-campus and be supervised by both a qualified teacher and an experienced professional authorized to supervise trainees for the external credential.

General Outcomes: *The student will:*

- perform assigned tasks and responsibilities efficiently and effectively as required by the credentialling agency
- analyze personal performance in relation to established standards
- demonstrate basic competencies.

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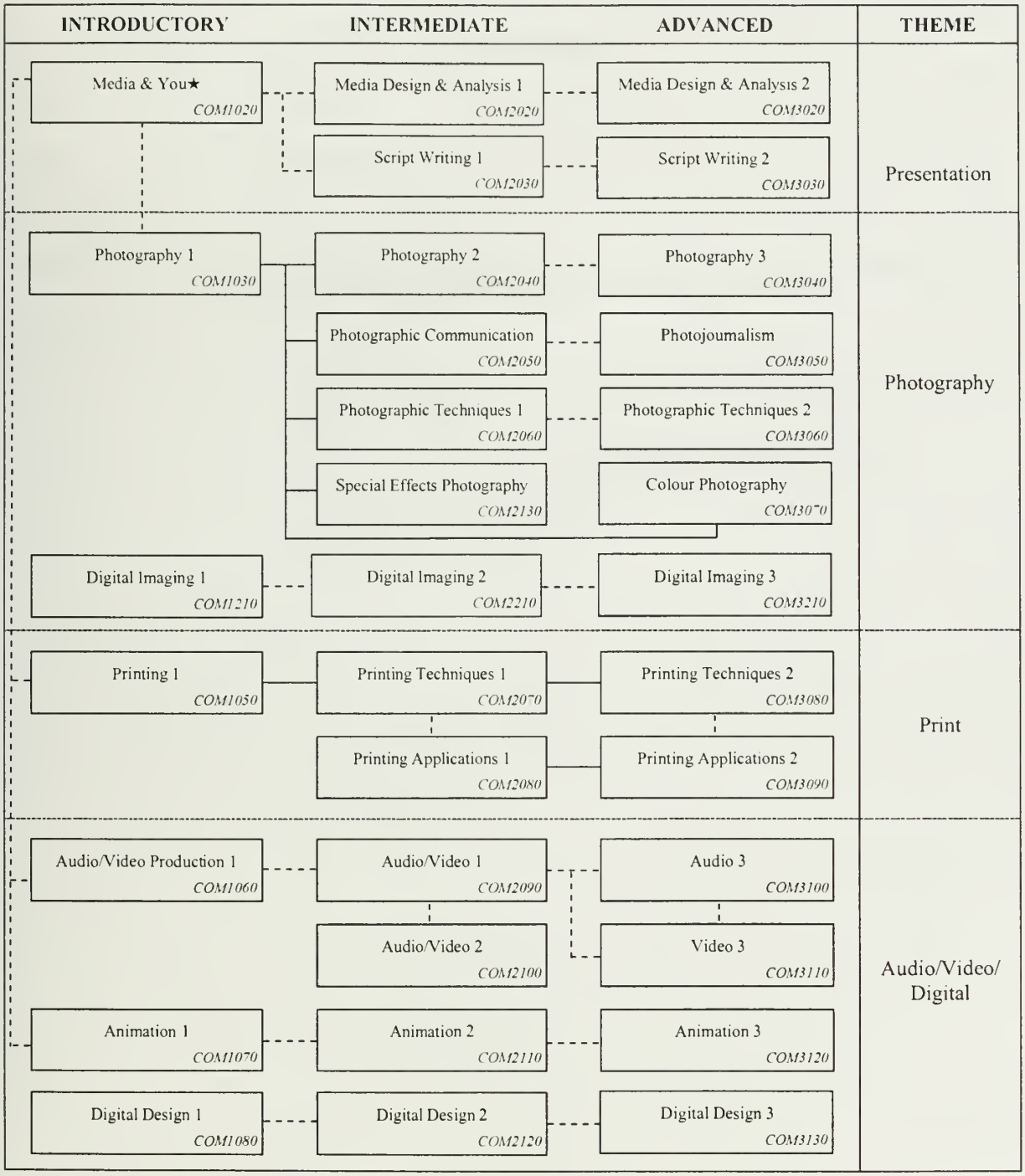
SCOPE AND SEQUENCE



——— Prerequisite - - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

Note: Presentation & Communication 1, 2 and 3 have been withdrawn effective September 2003, 2004 and 2005 respectively.

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GENERAL OUTCOMES: ADVANCED LEVEL

COURSE COM3020: MEDIA DESIGN & ANALYSIS 2

Level: Advanced

Theme: Presentation

Prerequisite: None

Description: Students use school and/or community resources to produce messages for a target audience to be delivered through two or more media.

General Outcomes: *The student will:*

- identify, select, justify and develop a message for a target audience, using two or more media
- analyze the same message, as delivered through different media
- critique media message/product
- demonstrate basic competencies.

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COURSE COM3030: SCRIPT WRITING 2

Level: Advanced

Theme: Presentation

Prerequisite: None

Description: Students refine script-writing skills by producing scripts for specific media formats.

General Outcomes: *The student will:*

- demonstrate knowledge and skill specific to writing scripts for selected formats
- select a format; e.g., long, short, and write a script in that format for a target audience
- demonstrate basic competencies.

COURSE COM3040: PHOTOGRAPHY 3

Level: Advanced

Theme: Photography

Prerequisite: None

Description: Students apply various light sources, multiple lighting arrangements and metering techniques with an emphasis on flash and studio lighting.

General Outcomes: *The student will:*

- identify and describe different camera and film formats
- use different camera and film formats
- apply the theory and operation of light-metering devices and electronic flash devices in a photographic assignment
- apply studio lighting techniques to a photographic assignment
- demonstrate basic competencies.

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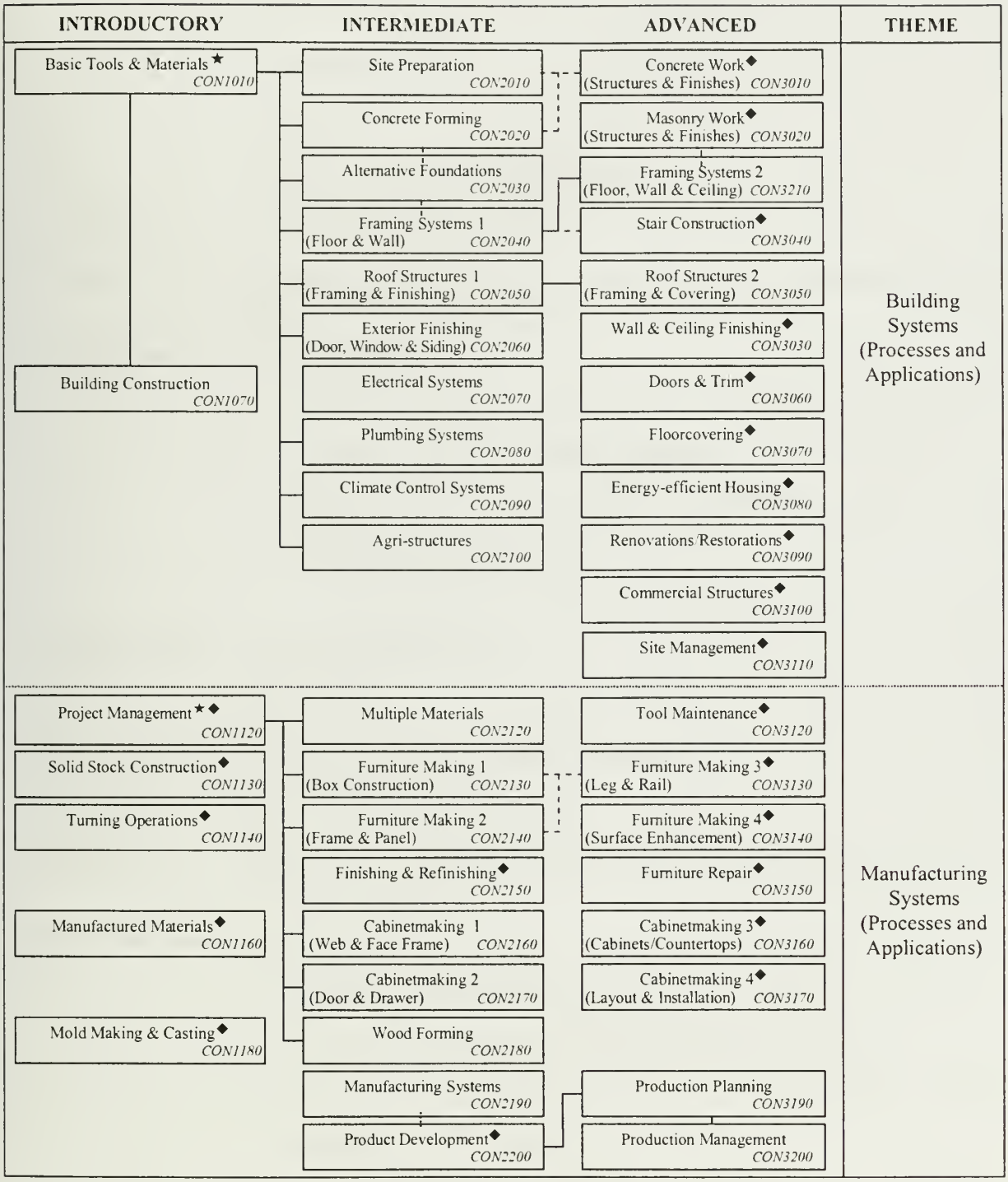
SCOPE AND SEQUENCE


INTRODUCTORY
INTERMEDIATE
ADVANCED
THEME
Basic Tools & Materials ★ CON1010
Building Construction CON1070
Site Preparation CON2010
Concrete Forming CON2020
Alternative Foundations CON2030
Framing Systems 1 (Floor & Wall) CON2040
Roof Structures 1 (Framing & Finishing) CON2050
Exterior Finishing (Door, Window & Siding) CON2060
Electrical Systems CON2070
Plumbing Systems CON2080
Climate Control Systems CON2090
Agri-structures CON2100
Concrete Work ◆ (Structures & Finishes) CON3010
Masonry Work ◆ (Structures & Finishes) CON3020
Framing Systems 2 (Floor, Wall & Ceiling) CON3210
Stair Construction ◆ CON3040
Roof Structures 2 (Framing & Covering) CON3050
Wall & Ceiling Finishing ◆ CON3030
Doors & Trim ◆ CON3060
Floorcovering ◆ CON3070
Energy-efficient Housing ◆ CON3080
Renovations/Restorations ◆ CON3090
Commercial Structures ◆ CON3100
Site Management ◆ CON3110
Building Systems (Processes and Applications)
Project Management ★ ◆ CON1120
Solid Stock Construction ◆ CON1130
Turning Operations ◆ CON1140
Manufactured Materials ◆ CON1160
Mold Making & Casting ◆ CON1180
Multiple Materials CON2120
Furniture Making 1 (Box Construction) CON2130
Furniture Making 2 (Frame & Panel) CON2140
Finishing & Refinishing ◆ CON2150
Cabinetmaking 1 (Web & Face Frame) CON2160
Cabinetmaking 2 (Door & Drawer) CON2170
Wood Forming CON2180
Manufacturing Systems CON2190
Product Development ◆ CON2200
Tool Maintenance ◆ CON3120
Furniture Making 3 ◆ (Leg & Rail) CON3130
Furniture Making 4 ◆ (Surface Enhancement) CON3140
Furniture Repair ◆ CON3150
Cabinetmaking 3 ◆ (Cabinets/Countertops) CON3160
Cabinetmaking 4 ◆ (Layout & Installation) CON3170
Production Planning CON3190
Production Management CON3200
Manufacturing Systems (Processes and Applications)

——— Prerequisite - - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

◆ Refer to specific courses for additional prerequisites.

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GENERAL OUTCOMES: INTERMEDIATE LEVEL

COURSE CON2010: SITE PREPARATION

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop the knowledge and skills to acquire a building permit and to locate and prepare a site for excavation and foundation work.

General Outcomes: *The student will:*

- identify and describe typical building site layout and excavation processes
- complete an application for a building permit
- apply site preparation skills to assist in the location of building site lines and features
- demonstrate basic competencies.

COURSE CON2020: CONCRETE FORMING

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop knowledge and skills related to the preparation and construction of a concrete foundation.

General Outcomes: *The student will:*

- list and describe factors that affect footing and wall design
- identify and describe common forming materials and processes
- apply concrete forming skills to assist in forming and placing a concrete foundation
- demonstrate basic competencies.

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COURSE CON2030: ALTERNATIVE FOUNDATIONS

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills related to the design and construction of an alternative foundation system.

General Outcomes: *The student will:*

- identify and describe the components of an alternative foundation system
- identify the health hazards and precautions related to the use of engineered materials
- apply construction skills to assist in the design/construction of an alternative foundation system
- demonstrate basic competencies.

COURSE CON2040: FRAMING SYSTEMS 1 (FLOOR & WALL)

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic framing knowledge and skills associated with the construction of a floor and wall system.

General Outcomes: *The student will:*

- identify and describe the parts of a floor and wall framing system
- read and interpret the appropriate drawings and specifications to create a floor and wall framing and sheathing estimate
- apply framing skills to assist in the layout and construction of floor and wall components
- demonstrate basic competencies.

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COURSE CON2050: ROOF STRUCTURES 1 (FRAMING & FINISHING)

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills associated with framing and finishing a simple roof system.

General Outcomes: *The student will:*

- identify and describe the different styles and parts of a roof system
- read and interpret the appropriate drawings and specifications to create a roof framing and finishing estimate
- apply roofing skills to assist in the framing and finishing of a roof structure
- demonstrate basic competencies.

COURSE CON2060: EXTERIOR FINISHING (DOOR, WINDOW & SIDING)

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply and develop basic knowledge of door, window and siding systems and installation skills and procedures.

General Outcomes: *The student will:*

- identify and describe common types of exterior doors, windows and siding materials
- read and interpret the appropriate drawings and specifications to create a door and window schedule and siding estimate
- apply finishing skills to install a prehung door, a window unit and siding materials
- demonstrate basic competencies.

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COURSE CON2070: ELECTRICAL SYSTEMS

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply electrical principles, and develop an understanding of residential electrical code requirements and installation procedures.

General Outcomes: *The student will:*

- list and describe the electrical systems and components associated with residential wiring
- apply wiring principles and code requirements to create a wiring diagram
- apply wiring skills to assist in the installation of a residential wiring system
- profile a trade or occupation within the electrical field
- demonstrate basic competencies.

COURSE CON2080: PLUMBING SYSTEMS

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills to fabricate and make repairs to residential drainage, waste, vent (DWV) and water supply systems.

General Outcomes: *The student will:*

- identify and describe the parts of a residential plumbing system
- create a drawing of a water supply, drainage, waste and vent system for a typical plumbing fixture
- apply plumbing skills to assist in the installation of a water supply, waste and vent system
- profile a trade or occupation within the plumbing field
- demonstrate basic competencies.

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COURSE CON2090: CLIMATE CONTROL SYSTEMS

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students investigate common heating, ventilating and air conditioning (HVAC) systems and principles, and participate in the installation or maintenance of one of these systems.

General Outcomes: *The student will:*

- list and describe the major components of a typical heating, ventilating and air conditioning system
- prepare a preventive maintenance schedule for a heating, ventilating and/or air conditioning system
- service or install a heating, ventilating and/or air conditioning system
- profile a trade or occupation within the heating and air conditioning fields
- demonstrate basic competencies.

COURSE CON2100: AGRI-STRUCTURES

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply construction principles and skills, and use pre-engineered designs to build a structure to be used for agricultural purposes.

General Outcomes: *The student will:*

- identify the major issues that must be addressed when designing an agri-structure
- read and interpret the appropriate drawings and specifications to create a material and cost estimate
- construct a structure for use in agriculture
- demonstrate basic competencies.

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COURSE CON2120: MULTIPLE MATERIALS

Level: Intermediate

Theme: Manufacturing Systems (Processes and Applications)

Prerequisite: CON1120 Project Management

Description: Students develop a product that incorporates two or more types of material in its construction.

General Outcomes: *The student will:*

- identify advantages of using different materials in a product
- apply knowledge of structural materials, planning, and construction techniques to produce a product from different materials
- demonstrate basic competencies.

COURSE CON2130: FURNITURE MAKING 1 (BOX CONSTRUCTION)

Level: Intermediate

Theme: Manufacturing Systems (Processes and Applications)

Prerequisite: CON1120 Project Management

Description: Students develop basic joinery skills and knowledge related to case construction, by producing a box-type piece of furniture.

General Outcomes: *The student will:*

- identify and describe the design features and processes used to construct a box-type furniture product
- apply basic furniture-making skills to plan and construct a piece of furniture based on box construction techniques
- demonstrate basic competencies.

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GENERAL OUTCOMES: ADVANCED LEVEL

COURSE CON3010: CONCRETE WORK (STRUCTURES & FINISHES)

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop essential skills to form, place and finish a concrete project.

General Outcomes: *The student will:*

- identify and describe concrete forming, placing and finishing techniques
- use the appropriate tools, materials and processes to form, reinforce, place and finish a concrete structure
- create a profile of a trade or occupation within the field of concrete work
- demonstrate basic competencies.

COURSE CON3020: MASONRY WORK (STRUCTURES & FINISHES)

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills related to masonry materials, structures and finishes.

General Outcomes: *The student will:*

- identify and describe common types of masonry materials and finishes
- read and interpret a working drawing to prepare a cost estimate of a masonry surface
- apply masonry skills to assist in the application of a masonry finish or in the construction of a masonry structure
- create a profile of a trade or occupation within the field of masonry work
- demonstrate basic competencies.

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COURSE CON3030: WALL & CEILING FINISHING

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills to insulate, install and finish an interior wall/ceiling surface.

General Outcomes: *The student will:*

- describe the procedures related to the installation of insulation and vapour barrier to an exterior wall and ceiling
- identify and describe the health hazards and safety precautions associated with the use of insulating, drywalling and finishing materials
- prepare, apply and finish a wall and ceiling surface
- demonstrate basic competencies.

COURSE CON3040: STAIR CONSTRUCTION

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop the knowledge and skills required to build a straight flight of stairs.

General Outcomes: *The student will:*

- identify and describe different stair types, component parts and construction techniques
- interpret building code regulations pertaining to residential stair design
- design, lay out and construct a straight flight of stairs
- demonstrate basic competencies.

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COURSE CON3050: ROOF STRUCTURES 2 (FRAMING & COVERING)

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON2050 Roof Structures 1 (Framing & Finishing)

Description: Students develop basic competencies in laying out, cutting and assembling common and hip and valley rafters in relation to specialized structures and coverings.

General Outcomes: *The student will:*

- identify and describe the design features of intersecting sloped roofs
- calculate the length of rafters, using ratio and proportion techniques
- lay out, cut and assemble a set of rafters for a roof assembly
- demonstrate basic competencies.

COURSE CON3060: DOORS & TRIM

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply basic finish carpentry knowledge and skills to install doors, railings and moldings.

General Outcomes: *The student will:*

- identify common types of doors, hardware and trim products
- install doors, moldings and other trim products
- create a profile of a trade or occupation within the finish carpentry field
- demonstrate basic competencies.

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COURSE CON3070: FLOORCOVERING

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop skills in selecting and installing typical floor coverings used in residential, institutional and commercial buildings.

General Outcomes: *The student will:*

- identify and describe common types of residential, institutional and commercial floor coverings
- apply flooring skills to assist in the installation of a floor covering
- create a profile of a trade or occupation within the floor covering field
- demonstrate basic competencies.

COURSE CON3080: ENERGY-EFFICIENT HOUSING

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1070 Building Construction

Description: Students investigate construction practices and support systems to create an energy-efficient housing design.

General Outcomes: *The student will:*

- identify and describe energy-efficient construction materials and techniques
- calculate the energy efficiency of a typical residence or commercial structure
- write a proposal outlining how to improve the energy efficiency of a given building
- demonstrate basic competencies.

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COSMETOLOGY STUDIES

B. STRAND RATIONALE AND PHILOSOPHY

Throughout history, people have practised various forms of body care, grooming and enhancement for personal, social, cultural and religious reasons. Some practitioners have applied their abilities in the workplace by providing professional cosmetology services to clients. The personal and professional care, grooming and enhancement of the human body is supported by an array of industries including those that manufacture cosmetics and related equipment, tools and supplies for personal and/or professional use, and those that provide professional cosmetology services. Each of these industries provides career opportunities for suitably qualified people.

Cosmetology Studies, a strand in Career and Technology Studies, focuses on personal and professional grooming, body care and enhancement practices, and provides students with opportunities to explore and prepare for cosmetology-related career options.

Cosmetology Studies encourages the student-centred process approach, which combines the development of thinking processes and practiced skills in concrete, realistic learning situations. Throughout Cosmetology Studies, students are encouraged to solve problems, make decisions and develop the abilities and flexibility needed to adapt quickly to new situations, including changes in career paths.

The emerging workplace requires that new entrants be lifelong learners who are able to access information and use technology to help solve problems and make decisions. Within the philosophy of Career and Technology Studies, *students* in Cosmetology Studies *will*:

- become responsible citizens
- appreciate and understand why personal appearance is significant in the home, at school and in the workplace
- identify and access career opportunities in cosmetology and appreciate the preparation needed to enter and progress in related fields
- develop confidence and flexibility as they assume adult roles and responsibilities and move into the workplace and/or further education and training programs
- achieve personal wellness by learning about personal and professional body care and grooming
- study, practise and achieve competencies in personal and professional grooming practices
- identify, practise and maintain high standards of safety and sanitation in personal and professional grooming activities.

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In order to achieve these competencies, *the student will*:

- apply knowledge, skills and attitudes from other disciplines in contexts related to self, family and workplace
- develop basic and career-specific skills that have applications for personal use and specific applications in the world of work
- develop positive attitudes toward work through participation in realistic learning activities in varied learning environments
- develop a more positive self-concept as he or she assumes increasingly complex roles and responsibilities
- develop a greater awareness of the role of cosmetology-related businesses and industries in society, and the potential for enterprise and innovation within the cosmetology industry.

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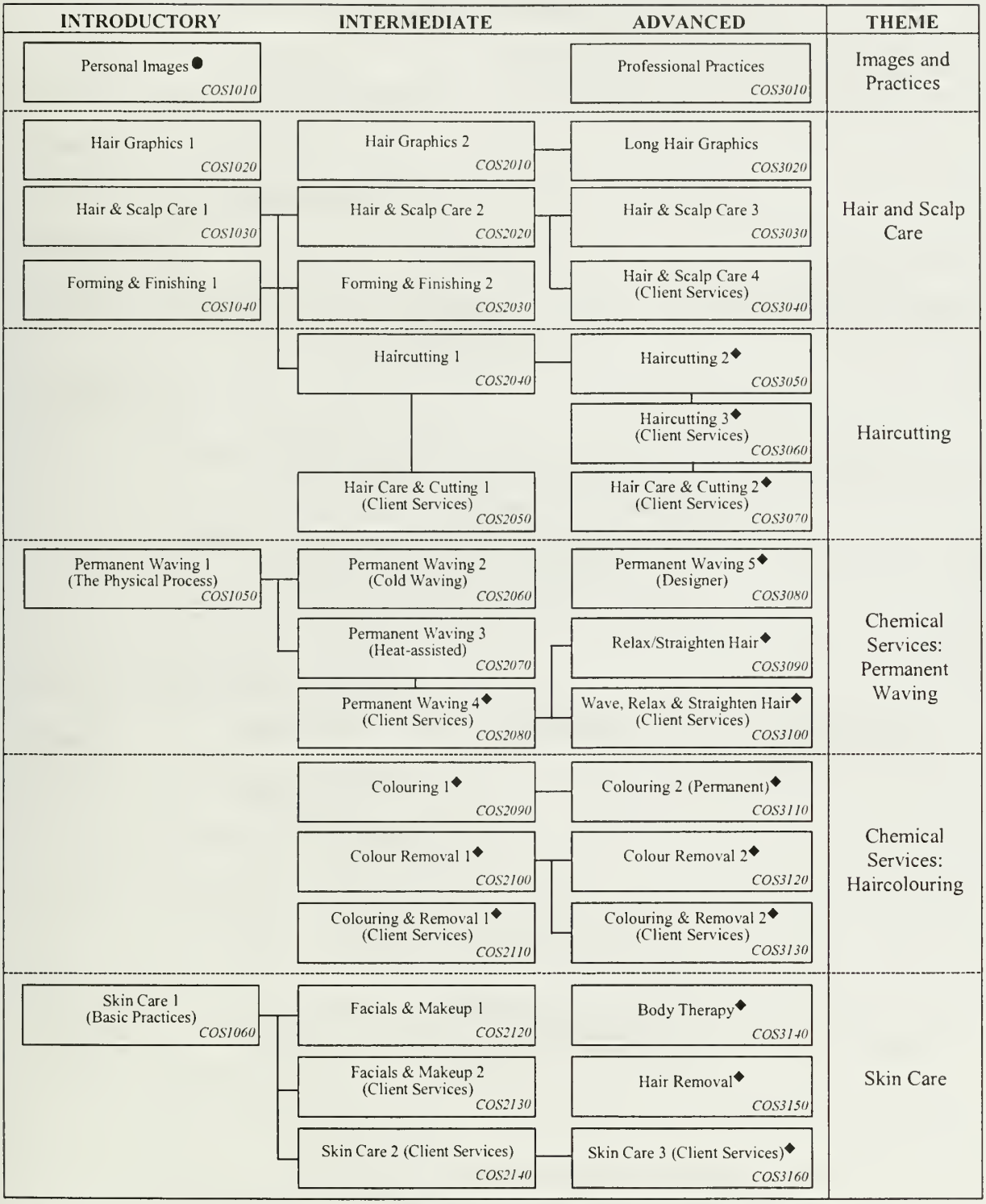
SCOPE AND SEQUENCE


INTRODUCTORY
INTERMEDIATE
ADVANCED
THEME
Personal Images ● COS1010
Professional Practices COS3010
Images and Practices
Hair Graphics 1 COS1020
Hair Graphics 2 COS2010
Long Hair Graphics COS3020
Hair & Scalp Care 1 COS1030
Hair & Scalp Care 2 COS2020
Hair & Scalp Care 3 COS3030
Forming & Finishing 1 COS1040
Forming & Finishing 2 COS2030
Hair & Scalp Care 4 (Client Services) COS3040
Hair and Scalp Care
Haircutting 1 COS2040
Haircutting 2◆ COS3050
Haircutting 3◆ (Client Services) COS3060
Hair Care & Cutting 1 (Client Services) COS2050
Hair Care & Cutting 2◆ (Client Services) COS3070
Haircutting
Permanent Waving 1 (The Physical Process) COS1050
Permanent Waving 2 (Cold Waving) COS2060
Permanent Waving 5◆ (Designer) COS3080
Permanent Waving 3 (Heat-assisted) COS2070
Relax/Straighten Hair◆ COS3090
Permanent Waving 4◆ (Client Services) COS2080
Wave, Relax & Straighten Hair◆ (Client Services) COS3100
Chemical Services: Permanent Waving
Colouring 1◆ COS2090
Colouring 2 (Permanent)◆ COS3110
Colour Removal 1◆ COS2100
Colour Removal 2◆ COS3120
Colouring & Removal 1◆ (Client Services) COS2110
Colouring & Removal 2◆ (Client Services) COS3130
Chemical Services: Haircolouring
Skin Care 1 (Basic Practices) COS1060
Facials & Makeup 1 COS2120
Body Therapy◆ COS3140
Facials & Makeup 2 (Client Services) COS2130
Hair Removal◆ COS3150
Skin Care 2 (Client Services) COS2140
Skin Care 3 (Client Services)◆ COS3160
Skin Care

Note: There are extensive prerequisite requirements that are too complex to be depicted in this scope and sequence chart.

- ● Prerequisite to all introductory courses in this strand.
- ◆ Please refer to specific courses for additional prerequisites.

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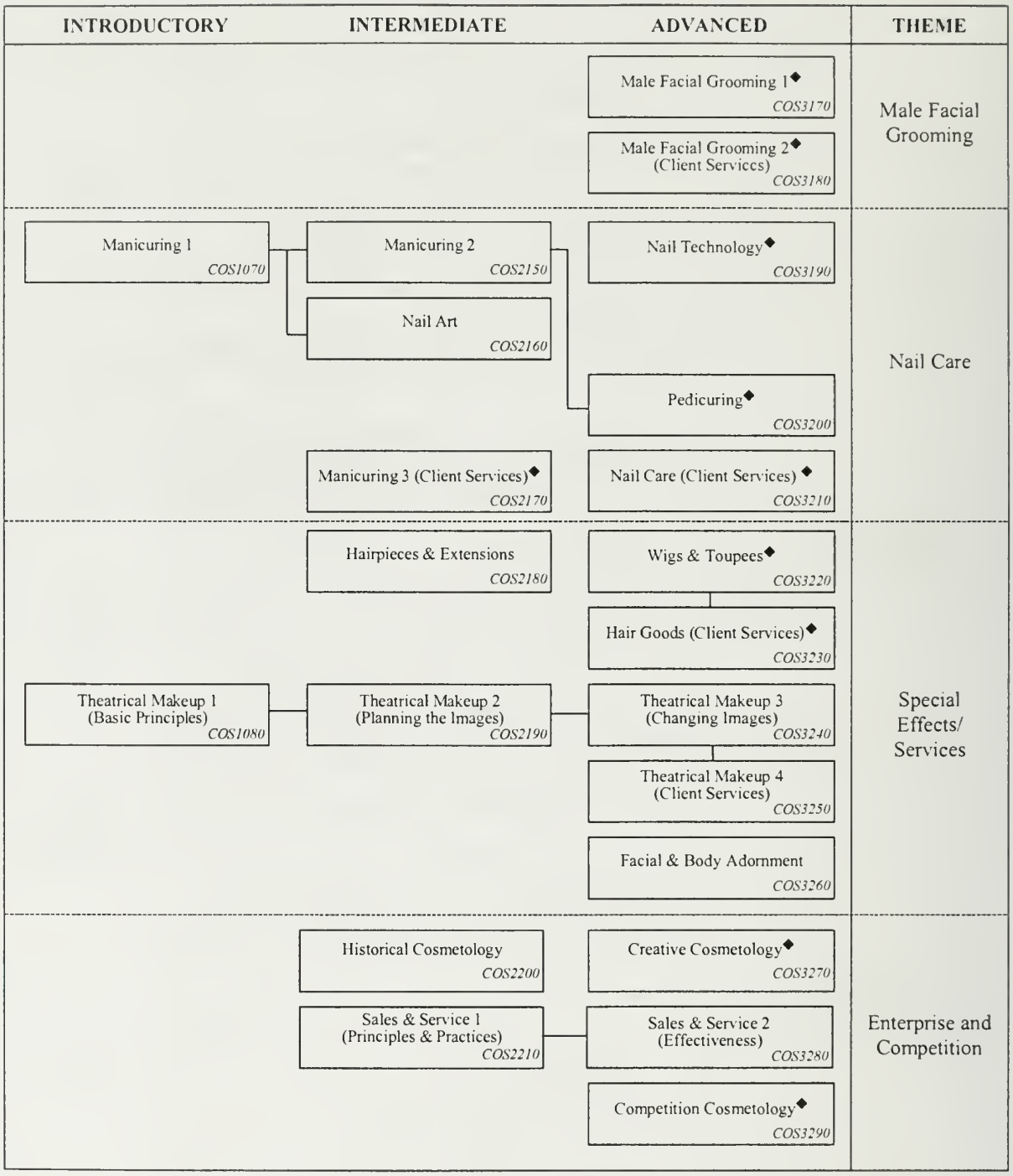
SCOPE AND SEQUENCE (continued)



Note: There are extensive prerequisite requirements that are too complex to be depicted in this scope and sequence chart.

◆ Please refer to specific courses for additional prerequisites.

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GENERAL OUTCOMES: INTRODUCTORY LEVEL

COURSE COS1010: PERSONAL IMAGES

Level: Introductory

Theme: Images and Practices

Prerequisite: None

Description: Students develop increased appreciation for the significance of personal grooming in various life situations, as well as the knowledge and skills required to perform basic grooming practices.

General Outcomes: *The student will:*

- appreciate that one's appearance is a mode of communication with others
- describe the relationship between a well-groomed appearance and a positive self-concept and develop a personal grooming plan
- identify, compare, apply and assess personal grooming practices and products that contribute to healthfulness
- demonstrate basic competencies.

COURSE COS1020: HAIR GRAPHICS 1

Level: Introductory

Theme: Hair and Scalp Care

Prerequisite: COS1010 Personal Images

Description: Students handle hair confidently; brush, comb and part hair correctly, and create ropes, knots and two- or three-strand braids.

General Outcomes: *The student will:*

- distinguish among and name different techniques used to create hair graphics
- identify and describe safety and sanitation practices used when creating hair graphics
- handle hair confidently while using a variety of implements to control, direct and part hair
- create and properly secure hair graphics, including ropes, knots and two- and three-strand braids
- demonstrate basic competencies.

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COURSE COS1030: HAIR & SCALP CARE 1

Level: Introductory

Theme: Hair and Scalp Care

Prerequisite: COS1010 Personal Images

Description: Students analyze and describe the structure and condition of hair and scalp, as well as identify and use basic cleansing and surface conditioning products.

General Outcomes: *The student will:*

- describe the structure, functions and conditions of the hair and scalp
- describe internal and external factors that may affect the hair and scalp
- select and use a variety of hair and scalp care products and implements to perform hair and scalp care treatments, including brushing, combing, cleansing and conditioning
- perform hair and scalp care treatments in a safe and sanitary manner
- demonstrate basic competencies.

COURSE COS1040: FORMING & FINISHING 1

Level: Introductory

Theme: Hair and Scalp Care

Prerequisite: COS1010 Personal Images

Description: Students wave, curl and style hair, using a variety of equipment, tools and supply items.

General Outcomes: *The student will:*

- identify and describe techniques available for forming and finishing hair
- select and use appropriate equipment, implements and materials for forming and finishing hair into selected hair effects and hairstyles
- perform all forming and finishing activities in a safe and sanitary manner
- demonstrate basic competencies.

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COURSE COS1050: PERMANENT WAVING 1 (THE PHYSICAL PROCESS)

Level: Introductory

Theme: Chemical Services: Permanent Waving

Prerequisite: COS1010 Personal Images

Description: Students section, block and wind hair for a basic permanent wave, using conventional waving rods and supplies.

General Outcomes: *The student will:*

- describe the history of permanent waving
- distinguish between the physical and chemical processes involved in the permanent waving of hair
- perform basic sectioning, blocking and winding techniques
- demonstrate alternative sectioning, blocking and winding techniques
- identify and follow safe and sanitary practices
- maintain records of processes used
- demonstrate basic competencies.

COURSE COS1060: SKIN CARE 1 (BASIC PRACTICES)

Level: Introductory

Theme: Skin Care

Prerequisite: COS1010 Personal Images

Description: Students identify the basic structures and functions of the skin, analyze skin and perform basic skin care practices, including cleansing, toning, nourishing and protecting.

General Outcomes: *The student will:*

- describe the functions of skin and identify the basic structure of skin, types of skin and factors that affect the condition of skin
- analyze skin, determine skin types and perform basic skin care, including safe and sanitary:
  - cleansing
  - toning
  - nourishing
  - protecting
- demonstrate basic competencies.

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COURSE COS1070: MANICURING 1

Level: Introductory

Theme: Nail Care

Prerequisite: COS1010 Personal Images

Description: Students identify the functions, shapes and basic structure of fingernails, conditions of hands and fingernails, and perform a plain manicure.

General Outcomes: *The student will:*

- describe the functions and identify and describe the:
  - basic structure of fingernails
  - common fingernail shapes
  - factors affecting the conditions of fingernails
- identify resources used to perform a plain manicure
- analyze hands and nails, perform plain manicures and follow safe and sanitary practices
- demonstrate basic competencies.

COURSE COS1080: THEATRICAL MAKEUP 1 (BASIC PRINCIPLES)

Level: Introductory

Theme: Special Effects/Services

Prerequisite: COS1010 Personal Images

Description: Students describe the purpose and scope of theatrical makeup, identify elements related to designing theatrical makeup, and use appropriate materials to perform basic theatrical makeup techniques.

General Outcomes: *The student will:*

- describe the purpose and scope of theatrical makeup and describe the basic principles of colour and theatrical makeup
- design, plan and create, in a safe and sanitary manner, basic theatrical makeup
- demonstrate basic competencies.

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GENERAL OUTCOMES: INTERMEDIATE LEVEL

COURSE COS2010: HAIR GRAPHICS 2

Level: Intermediate

Theme: Hair and Scalp Care

Prerequisite: COS1020 Hair Graphics 1

Description: Students use photo or other images as guides to recreate a variety of ropes, braids, knots, rolls and twists to produce finished hairstyles.

General Outcomes: *The student will:*

- demonstrate understanding of the principles of symmetry and asymmetry as applied to hairstyling
- select and recreate images of ropes, braids, knots, rolls and twists to produce secure finished hairstyles and hair graphics
- demonstrate basic competencies.

COURSE COS2020: HAIR & SCALP CARE 2

Level: Intermediate

Theme: Hair and Scalp Care

Prerequisite: COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the histology and condition of hair and the relationship of hair to the scalp, and select and use appropriate hair and scalp cleansing and conditioning products.

General Outcomes: *The student will:*

- describe the relationships among:
  - hair condition
  - scalp condition
  - safe and sanitary hair care practices
- identify and describe the purpose and application of various hair and scalp care products and technologies
- perform hair and scalp care services, including client analysis and preparation, hair and scalp analysis, product and technology selection, shampooing and conditioning
- demonstrate basic competencies.

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COURSE COS2030: FORMING & FINISHING 2

Level: Intermediate

Theme: Hair and Scalp Care

Prerequisite: COS1040 Forming & Finishing 1
COS1010 Personal Images

Description: Students analyze head and facial features, determine suitable hairstyles, and form and finish hairstyles.

General Outcomes: *The student will:*

- form hair by shaping, constructing and securing a variety of pin curls
- finish hair by combing out constructed and dried pin curls
- identify, describe and analyze factors that affect the selection of a hairstyle and the forming and finishing techniques suited to achieving the selected hairstyle
- wave and curl hair using a combination of forming and finishing techniques, including:
  - pin curling
  - roller setting
  - iron setting
  - finger waving
  - blow waving/styling
- demonstrate basic competencies.

COURSE COS2040: HAIRCUTTING 1

Level: Intermediate

Theme: Haircutting

Prerequisite: COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students demonstrate safe handling of haircutting and hairthinning tools, and describe and demonstrate basic cutting methods.

General Outcomes: *The student will:*

- define and describe terms related to professional haircutting and explain why professional haircutting is the foundation for hairstyling, other hair services and a feature of personal grooming
- describe and demonstrate safe handling of haircutting and hairthinning tools
- interpret and follow cutting patterns to:
  - section
  - cut
  - follow guidelines
  - section and cut hair to predetermined shapes, lengths and styles
- demonstrate basic competencies.

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COURSE COS2050: HAIR CARE & CUTTING 1 (CLIENT SERVICES)

Level: Intermediate

Theme: Haircutting

Prerequisite: COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze a client's need for hair and scalp care and perform the necessary services.

General Outcomes: *The student will:*

- meet, greet and make a client feel welcome and comfortable, and prepare the client for selected services
- consult with and analyze a client's needs for hair and scalp care and haircutting services, and recommend suitable services
- perform hair and scalp care and haircutting services agreed to by a client in a safe and sanitary manner, and record information on services performed
- demonstrate basic competencies.

COURSE COS2060: PERMANENT WAVING 2 (COLD WAVING)

Level: Intermediate

Theme: Chemical Services: Permanent Waving

Prerequisite: COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students identify types of chemicals used to permanently wave hair and the relationship between the chemical process and the physical process. Students also analyze hair and combine the two processes to perform complete cold waves.

General Outcomes: *The student will:*

- distinguish between techniques used to curl hair temporarily and permanently; describe the chemistry of cold waving, and the effects of cold waving chemicals on the hair and scalp
- prepare and protect the client, self and others, and perform basic physical and chemical cold waving processes in a safe and sanitary manner, and maintain records of materials used and results attained
- demonstrate basic competencies.

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COURSE COS2070: PERMANENT WAVING 3 (HEAT-ASSISTED)

Level: Intermediate

Theme: Chemical Services: Permanent Waving

Prerequisite: COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students use appropriate physical and chemical processes and products to perform heat-assisted permanent waves, and analyze the quality of the waves.

General Outcomes: *The student will:*

- distinguish between:
  - procedures, technologies and effects of heat-assisted and cold permanent waving on the hair and scalp
  - technology and techniques used in heat-assisted waving and cold waving
- section, block, wrap, wind and process hair, using available heat-assisted waving techniques, and protect the health and safety of a client, self and others
- demonstrate basic competencies.

COURSE COS2080: PERMANENT WAVING 4 (CLIENT SERVICES)

Level: Intermediate

Theme: Chemical Services: Permanent Waving

Prerequisite: COS2070 Permanent Waving 3 (Heat-assisted)
COS2060 Permanent Waving 2 (Cold Waving)
COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students analyze the condition of hair, identify and describe available types of permanent waves, and recommend and perform permanent waving services appropriate to the client's needs and wants.

General Outcomes: *The student will:*

- meet, greet, welcome and orient a client to available permanent waving services
- consult with and analyze a client's needs, hair and scalp condition and suitability for permanent waving services, and recommend suitable services
- perform permanent waving services agreed to by a client in a safe and sanitary manner, and record information or services performed
- demonstrate basic competencies.

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COURSE COS2090: COLOURING 1

Level: Intermediate

Theme: Chemical Services: Haircolouring

Prerequisite: COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students describe the basic principles of colour and haircolouring, describe and perform patch/predisposition and strand tests, and prepare and apply temporary and semipermanent haircolours.

General Outcomes: *The student will:*

- describe and explain principles and practices of colouring hair; identify and describe the different types of haircolouring agents, their chemistry and effects on the hair and scalp
- analyze hair and scalp; determine their suitability for different types of haircolouring; perform safe and sanitary, temporary and semipermanent haircolouring practices
- demonstrate basic competencies.

COURSE COS2100: COLOUR REMOVAL 1

Level: Intermediate

Theme: Chemical Services: Haircolouring

Prerequisite: COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students describe the basic principles of colour removal, levels of colour, colour removal chemicals and application procedures, and prepare and apply a variety of products to remove natural and artificial haircolour.

General Outcomes: *The student will:*

- define terms and explain practices related to removal of colour from hair, and explain the chemistry and action of hydrogen peroxide in the highlighting and colour removal process
- analyze hair and scalp, determine suitability for a colour removal procedure, prepare, apply and process selected colour removal agents, and follow safe and sanitary practices
- demonstrate basic competencies.

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COURSE COS2110: COLOURING & REMOVAL 1 (CLIENT SERVICES)

Level: Intermediate

Theme: Chemical Services: Haircolouring

Prerequisite: COS2100 Colour Removal 1
COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the condition of a client's hair and scalp, and prepare for and perform colouring and colour removal services.

General Outcomes: *The student will:*

- meet, greet, welcome and orient a client to haircolouring and colour removal services
- consult with and analyze a client's needs, hair and scalp condition and suitability for haircolouring or colour removal services, and recommend suitable services
- perform colouring or decolouring services agreed to by a client in a safe and sanitary manner, and record information on services performed and chemicals used
- demonstrate basic competencies.

COURSE COS2120: FACIALS & MAKEUP 1

Level: Intermediate

Theme: Skin Care

Prerequisite: COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students describe the anatomy, physiology and histology of the skin and the effect of pathogenic organisms on the body. Students also analyze facial shapes and conditions, and perform facial care and corrective makeup techniques.

General Outcomes: *The student will:*

- relate knowledge about bacteriology and human anatomy, physiology and histology to the service and practice of cosmetology
- analyze facial shapes, features and conditions; identify and describe conditions that may/may not be treated by a cosmetologist
- perform basic facial care and corrective makeup services in a safe and sanitary manner
- demonstrate basic competencies.

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COURSE COS2130: FACIALS & MAKEUP 2 (CLIENT SERVICES)

Level: Intermediate

Theme: Skin Care

Prerequisite: COS2120 Facials & Makeup 1
COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students consult with and analyze a client's skin care needs, and perform a variety of facial services, including surface cleansing and corrective makeup techniques.

General Outcomes: *The student will:*

- meet, greet, welcome and orient client to facials and makeup services
- consult with and analyze a client's needs for facial and makeup services, and perform facials and basic and corrective makeup services in a safe and sanitary manner
- demonstrate basic competencies.

COURSE COS2140: SKIN CARE 2 (CLIENT SERVICES)

Level: Intermediate

Theme: Skin Care

Prerequisite: COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students consult with and analyze the client's skin care needs, and recommend and perform client-approved services, including cleansing, toning (manual and electrical massage), nourishing and protecting.

General Outcomes: *The student will:*

- meet, greet, welcome and orient a client to available skin care services, including available skin care technology
- consult with and analyze a client's skin care condition and needs, recommend appropriate services and technology-based treatments, and perform skin care services and treatments in a safe and sanitary manner
- demonstrate basic competencies.

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COURSE COS2150: MANICURING 2

Level: Intermediate

Theme: Nail Care

Prerequisite: COS1070 Manicuring 1
COS1010 Personal Images

Description: Students describe the anatomy of the arm and hand, identify diseases and disorders of the hands and nails and hand and nail conditions that may be treated by a manicurist, and recommend and perform services for treatable conditions.

General Outcomes: *The student will:*

- recognize conditions, disorders and diseases of the hands and nails, describe conditions and disorders that may be treated by a manicurist, and suggest treatments for each condition or disorder
- analyze treatable hand and nail conditions, perform a variety of manicuring services, including plain and oil manicures, and hand and arm massage
- demonstrate basic competencies.

COURSE COS2160: NAIL ART

Level: Intermediate

Theme: Nail Care

Prerequisite: COS1070 Manicuring 1
COS1010 Personal Images

Description: Students describe nail art techniques used to enhance the appearance of fingernails, as well as design and produce simple nail art.

General Outcomes: *The student will:*

- define and describe nail art, and identify and describe materials and cosmetics available to create various nail art procedures and create basic nail art designs
- design a variety of nail art images, using appropriate nail art materials and cosmetics
- demonstrate basic competencies.

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COURSE COS2170: MANICURING 3 (CLIENT SERVICES)

Level: Intermediate

Theme: Nail Care

Prerequisite: COS2150 Manicuring 2
COS1070 Manicuring 1
COS1010 Personal Images

Description: Students analyze hands and nails to determine manicure needs and the presence of treatable and nontreatable conditions, as well as select and perform appropriate manicure and related services.

General Outcomes: *The student will:*

- meet, greet and orient a client to available manicure services
- consult with and analyze a client's hands, nails and manicure needs, and perform services in a safe and sanitary manner
- demonstrate basic competencies.

COURSE COS2180: HAIRPIECES & EXTENSIONS

Level: Intermediate

Theme: Special Effects/Services

Prerequisite: COS1010 Personal Images

Description: Students describe the purpose of hairpieces and extensions and types of hair and fibres used in constructing hair goods, and analyze and service hair goods.

General Outcomes: *The student will:*

- describe the uses of hair goods and distinguish among the types of hair and fibres used in constructing hair goods
- analyze hair goods, perform appropriate cleansing, conditioning, forming and finishing procedures on hairpieces and extensions, and attach hairpieces and extensions
- demonstrate basic competencies.

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COURSE COS2190: THEATRICAL MAKEUP 2 (PLANNING THE IMAGES)

Level: Intermediate

Theme: Special Effects/Services

Prerequisite: COS1080 Theatrical Makeup 1 (Basic Principles)
COS1010 Personal Images

Description: Students design, select and apply makeup to create images of selected characters and to enhance personal appearances for theatrical purposes.

General Outcomes: *The student will:*

- develop a plan to change physical images by applying design principles to the use of theatrical makeup
- execute theatrical makeup plans to create, change and enhance physical images
- demonstrate basic competencies.

COURSE COS2200: HISTORICAL COSMETOLOGY

Level: Intermediate

Theme: Enterprise and Competition

Prerequisite: COS1010 Personal Images

Description: Students, in addition to recreating historical hairstyles and facial images, describe the historical trends in hairstyles and makeup, and the relationship between historical changes in cosmetology to other changes in society.

General Outcomes: *The student will:*

- identify and describe:
  - historical, period-related trends in hair and makeup stylings
  - career options available to cosmetologists skilled in recreating historical hair and makeup stylings
- apply principles and practices of cosmetology and design to design and create historical hair and facial stylings
- demonstrate basic competencies.

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COURSE COS2210: SALES & SERVICE 1 (PRINCIPLES & PRACTICES)

Level: Intermediate

Theme: Enterprise and Competition

Prerequisite: COS1010 Personal Images

Description: Students describe and demonstrate basic principles of selling and service in the various sectors of the cosmetology industry.

General Outcomes: *The student will:*

- identify and describe ethical principles and practices of professional cosmetologists
- define, describe and demonstrate the attention, interest, desire, action (AIDA) and courtesy, attention, receptivity/respect, efficiency/effectiveness (CARE) principles, and apply these principles to personal selling, and display merchandising within the cosmetology industry
- demonstrate basic competencies.

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GENERAL OUTCOMES: ADVANCED LEVEL

COURSE COS3010: PROFESSIONAL PRACTICES

Level: Advanced

Theme: Images and Practices

Prerequisite: COS1010 Personal Images

Description: Students describe the sectors of the cosmetology industry, as well as current and projected trends, needs, career opportunities, trade ethics and qualifications required for entry into each sector.

General Outcomes: *The student will:*

- identify sectors of the cosmetology industry and the work performed in each sector
- identify and describe the qualifications required for entry into each sector of the industry
- identify and report on current and projected trends in the industry
- demonstrate ethical, interpersonal and communication skills suited to professional cosmetologists
- demonstrate basic competencies.

COURSE COS3020: LONG HAIR GRAPHICS

Level: Advanced

Theme: Hair and Scalp Care

Prerequisite: COS2010 Hair Graphics 2
COS1020 Hair Graphics 1
COS1010 Personal Images

Description: Students design and produce symmetrical and asymmetrical hairstyles to create long hair graphics.

General Outcomes: *The student will:*

- select, design and create a variety of long hair graphics to suit different facial, personality and situational needs
- demonstrate basic competencies.

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COURSE COS3030: HAIR & SCALP CARE 3

Level: Advanced

Theme: Hair and Scalp Care

Prerequisite: COS2020 Hair & Scalp Care 2
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the condition of the hair and scalp, make treatment decisions and recommendations, and clean and condition the hair and scalp, using available technology.

General Outcomes: *The student will:*

- analyze the hair and scalp, and identify treatable and nontreatable conditions
- make decisions and perform appropriate cleansing and conditioning treatments in a safe and sanitary manner
- demonstrate basic competencies.

COURSE COS3040: HAIR & SCALP CARE 4 (CLIENT SERVICES)

Level: Advanced

Theme: Hair and Scalp Care

Prerequisite: COS2020 Hair & Scalp Care 2
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze a client's hair and scalp, make treatment decisions and recommend services, and perform client-approved hair and scalp care services to a client's satisfaction.

General Outcomes: *The student will:*

- analyze hair and scalp, recommend treatment, promote the sale of related services, and perform client-approved hair and scalp care services to a client's satisfaction
- recommend and promote the sale of hair and scalp care products
- demonstrate basic competencies.

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COURSE COS3050: HAIRCUTTING 2

Level: Advanced

Theme: Haircutting

Prerequisite: COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students demonstrate the ability to design and follow cutting patterns, and safely use haircutting and thinning shears, razors and electric clippers.

General Outcomes: *The student will:*

- create a variety of cutting patterns/plans
- follow cutting patterns, and apply principles of elevation to produce a variety of layered/tapered haircuts by selecting and using cutting implements appropriate to the task
- demonstrate basic competencies.

COURSE COS3060: HAIRCUTTING 3 (CLIENT SERVICES)

Level: Advanced

Theme: Haircutting

Prerequisite: COS3050 Haircutting 2
COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze hair, scalp, face, haircuts and styles, recommend hairstyles, prepare clients and perform haircutting services.

General Outcomes: *The student will:*

- consult with a client and interpret haircutting needs
- perform safe and sanitary haircutting services for adults and children to their satisfaction
- demonstrate basic competencies.

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COURSE COS3070: HAIR CARE & CUTTING 2 (CLIENT SERVICES)

Level: Advanced

Theme: Haircutting

Prerequisite:
COS3060 Haircutting 3 (Client Services)
COS3050 Haircutting 2
COS3040 Hair & Scalp Care 4 (Client Services)
COS2040 Haircutting 1
COS2020 Hair & Scalp Care 2
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students consult with the client to determine services desired, analyze a client's hair and scalp, face and facial features, and recommend and perform client-approved services and treatments to create finished hairstyles.

General Outcomes: *The student will:*

- present a confident and professional appearance and manner when analyzing and meeting a client's needs and promoting the sale of appropriate services and products
- perform a variety of safe and sanitary hair and scalp care and haircutting services agreed to by a client
- demonstrate basic competencies.

COURSE COS3080: PERMANENT WAVING 5 (DESIGNER)

Level: Advanced

Theme: Chemical Services: Permanent Waving

Prerequisite:
COS2080 Permanent Waving 4 (Client Services)
COS2070 Permanent Waving 3 (Heat-assisted)
COS2060 Permanent Waving 2 (Cold Waving)
COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students identify and describe designer techniques, processes and implements used to permanently wave hair, complete a chemical process for each designer technique, and describe the advantages and disadvantages of each technique.

General Outcomes: *The student will:*

- identify and interpret the purpose and potential use of alternative designer permanent waving techniques
- analyze each client's permanent waving needs, recommend a pattern/ technique and perform a variety of designer permanent waving techniques
- demonstrate basic competencies.

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COURSE COS3090: RELAX/STRAIGHTEN HAIR

Level: Advanced

Theme: Chemical Services: Permanent Waving

Prerequisite:
COS2080 Permanent Waving 4 (Client Services)
COS2070 Permanent Waving 3 (Heat-assisted)
COS2060 Permanent Waving 2 (Cold Waving)
COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students describe the purposes and products available to physically and chemically relax and straighten hair, and identify, describe and practise safe relaxing and straightening techniques.

General Outcomes: *The student will:*

- identify and describe methods, technology, chemicals and other products used to relax or straighten hair and the effect of these services on the hair and scalp
- analyze the hair and scalp to determine their suitability for straightening or relaxing services, determine type of service to offer and products to use, and perform safe and sanitary hair relaxing and straightening procedures
- demonstrate basic competencies.

COURSE COS3100: WAVE, RELAX & STRAIGHTEN HAIR (CLIENT SERVICES)

Level: Advanced

Theme: Chemical Services: Permanent Waving

Prerequisite:
COS3090 Relax/Straighten Hair
COS2080 Permanent Waving 4 (Client Services)
COS2070 Permanent Waving 3 (Heat-assisted)
COS2060 Permanent Waving 2 (Cold Waving)
COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students analyze a client's hair and scalp, and recommend appropriate waving, relaxing and straightening services.

General Outcomes: *The student will:*

- consult with and analyze a client's waving, relaxing and straightening needs
- recommend and promote appropriate services and treatments
- perform client-approved services to a client's satisfaction
- demonstrate basic competencies.

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COURSE COS3110: COLOURING 2 (PERMANENT)

Level: Advanced

Theme: Chemical Services: Haircolouring

Prerequisite: COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students describe the purposes and principles of permanent haircolouring, identify permanent colouring products, their active ingredients and their effects on the hair and possible effects on the body, and demonstrate skin and strand testing and retouch and whole head colour applications.

General Outcomes: *The student will:*

- identify and describe:
  - purposes, principles and types of permanent haircolouring
  - products available to colour hair permanently
  - product selection, mixing and preparation processes
  - safety practices that must be followed when using permanent haircolours
- perform a variety of permanent haircolouring procedures, including the application of:
  - coating dyes
  - aniline derivative tints
- demonstrate basic competencies.

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COURSE COS3120: COLOUR REMOVAL 2

Level: Advanced

Theme: Chemical Services: Haircolouring

Prerequisite: COS2100 Colour Removal 1
COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the condition of the hair and scalp and the nature of colour in/on hair, and prepare and apply various colour removal products to regrowths and whole heads of hair.

General Outcomes: *The student will:*

- identify and describe the range of colour removal methods, techniques and products available to professional cosmetologists, and the safety and sanitation required before, during and after each colour removal service
- analyze the hair and scalp, and determine their suitability to receive colour removal services
- perform a variety of safe and sanitary colour removal procedures including the use of:
  - bleaches (oil, cream, powder)
  - dye solvents
  - other colour removers
- demonstrate basic competencies.

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COURSE COS3130: COLOURING & REMOVAL 2 (CLIENT SERVICES)

Level: Advanced

Theme: Chemical Services: Haircolouring

Prerequisite:
COS3120 Colour Removal 2
COS2100 Colour Removal 1
COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the condition of a client's hair and scalp, consult with the client and recommend, prepare for, and perform colouring and colour removal services.

General Outcomes: *The student will:*

- demonstrate competencies related to current haircolouring and colour removal services, including:
  - hair and scalp analysis
  - client consultation
  - service promotion and sales
  - client preparation
  - safe and sanitary colour and colour removal applications
  - pre- and post-conditioning practices, where necessary
  - meeting a client's needs
- demonstrate basic competencies.

COURSE COS3140: BODY THERAPY

Level: Advanced

Theme: Skin Care

Prerequisite:
COS2140 Skin Care 2 (Client Services)
COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students apply available technology to provide therapies (heat, electrical and light), apply principles and practices of body therapy, and apply skin care products to body surfaces.

General Outcomes: *The student will:*

- identify and describe the beauty therapist's role, and the therapies and technologies used, and their effects on body health and appearance
- apply principles and practices of body therapy and use available technologies to enhance each client's wellness and appearance
- demonstrate basic competencies.

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COURSE COS3150: HAIR REMOVAL

Level: Advanced

Theme: Skin Care

Prerequisite: COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students describe temporary and permanent hair removal methods, classify each method as a physical, chemical or electrical procedure, and identify and describe safety and sanitary practices for each procedure.

General Outcomes: *The student will:*

- distinguish between temporary and permanent methods of hair removal and describe the advantages/disadvantages of each method
- distinguish between hairs that may be removed and those that must not be removed
- analyze skin to determine suitability for hair removal service and use physical methods to remove hair in a safe and sanitary manner
- demonstrate basic competencies.

COURSE COS3160: SKIN CARE 3 (CLIENT SERVICES)

Level: Advanced

Theme: Skin Care

Prerequisite: COS2140 Skin Care 2 (Client Services)
COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students analyze a client's skin and determine skin care needs, consult with the client, and recommend, prepare for, and perform approved skin care services.

General Outcomes: *The student will:*

- welcome and orient the client, analyze skin care needs, recommend and promote the sale of services and products relating to these needs
- prepare the client and perform client-approved safe and sanitary skin care services
- demonstrate basic competencies.

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COURSE COS3170: MALE FACIAL GROOMING 1

Level: Advanced

Theme: Male Facial Grooming

Prerequisite: COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students describe principles and demonstrate practices for male facial grooming, including basic skin care, shaving, moustache/beard shaping, trimming and waxing, and nasal and aural hair removal.

General Outcomes: *The student will:*

- identify and describe the history, purpose and principles of shaving, and the shaping, trimming and waxing of male facial hair
- demonstrate the safe and sanitary handling of implements and technology for male facial grooming and male facial grooming procedures
- demonstrate basic competencies.

COURSE COS3180: MALE FACIAL GROOMING 2 (CLIENT SERVICES)

Level: Advanced

Theme: Male Facial Grooming

Prerequisite: COS3170 Male Facial Grooming 1
COS2040 Haircutting 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze a client's face to determine facial grooming needs, consult with the client, and recommend and perform male facial grooming services, as required.

General Outcomes: *The student will:*

- welcome, orient and consult with and analyze a client's needs for male facial grooming services and products, and recommend and promote the sale of these services and products
- perform client-approved safe and sanitary male facial grooming procedures to a client's satisfaction
- demonstrate basic competencies.

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COURSE COS3190: NAIL TECHNOLOGY

Level: Advanced

Theme: Nail Care

Prerequisite: COS1070 Manicuring 1
COS1010 Personal Images

Description: Students describe causes of nail breakage and damage, demonstrate techniques used to repair damaged nails and apply artificial nails, and describe effects of artificial/sculptured nails on natural nails.

General Outcomes: *The student will:*

- define nail technology and describe current nail technology services and their purpose
- identify, describe and demonstrate the safe and sanitary use of materials and implements associated with nail technology services
- analyze hands and nails and perform a variety of nail technology services; e.g., applying and maintaining:
  - nail tips
  - nail wraps
  - acrylic nails
  - fill-ins
  - gels
- demonstrate basic competencies.

COURSE COS3200: PEDICURING

Level: Advanced

Theme: Nail Care

Prerequisite: COS1070 Manicuring 1
COS1010 Personal Images

Description: Students describe relationships between a manicure and pedicure, and identify and demonstrate a pedicuring procedure, including foot massage.

General Outcomes: *The student will:*

- describe the purpose of pedicuring and the relationship between a manicure and pedicure
- identify and describe the basic structure of feet and the diseases and disorders that may affect feet
- analyze feet, determine their suitability for pedicure services, prepare a pedicure work area, and perform pedicure procedures, including foot massage
- demonstrate basic competencies.

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COURSE COS3210: NAIL CARE (CLIENT SERVICES)

Level: Advanced

Theme: Nail Care

Prerequisite:
COS3200 Pedicuring
COS2150 Manicuring 2
COS1070 Manicuring 1
COS1010 Personal Images

Description: Students analyze client hands, feet and nails and determine manicure/pedicure needs, consult with the client and recommend services and products to enhance the condition and appearance of nails, and use available technology to perform manicures/pedicures and related services.

General Outcomes: *The student will:*

- meet, greet and orient a client to available manicure and pedicure services
- consult with a client, analyze tissues of hands and feet, determine nail care needs, and recommend and perform services agreed to by the client in a safe and sanitary manner
- demonstrate basic competencies.

COURSE COS3220: WIGS & TOUPEES

Level: Advanced

Theme: Special Effects/Services

Prerequisite:
COS3110 Colouring (Permanent)
COS3050 Haircutting 2
COS2180 Hairpieces & Extensions
COS2090 Colouring 1
COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students identify the purpose of wigs and toupees, and factors affecting the quality of wigs and toupees, and demonstrate safe and sanitary procedures used to clean, colour, cut, fit, repair and style wigs and toupees, as well as take head measurements and samples.

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General Outcomes: *The student will:*

- explain the reasons why people wear wigs and toupees
- describe different types of wigs and toupees, the advantages/disadvantages of using natural hair/synthetic fibres and related quality factors
- block and secure wigs and hairpieces and perform services (on natural hair and synthetic fibre hair goods), including:
  - cleaning
  - conditioning
  - cutting/shaping
  - forming and finishing
  - minor repairs
  - colouring (temporary, semipermanent)
  - measuring and sampling
- demonstrate basic competencies.

COURSE COS3230: HAIR GOODS (CLIENT SERVICES)

Level: Advanced

Theme: Special Effects/Services

Prerequisite: COS3220 Wigs & Toupees
COS3110 Colouring (Permanent)
COS3050 Haircutting 2
COS2180 Hairpieces & Extensions
COS2090 Colouring 1
COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze hair goods, make decisions relating to services needed, perform client-approved services to hair goods, and take a client's head measurements in preparation for ordering a custom-made hair good.

General Outcomes: *The student will:*

- analyze a client's hair goods, recommend care, maintenance and enhancement services, promote the sale of hair goods related care and maintenance products
- perform a variety of services to hair goods to ensure that they are maintained and enhanced to a client's satisfaction; measure a client's head and take samples of a client's hair in preparation for ordering a wig or toupee
- demonstrate basic competencies.

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COURSE COS3240: THEATRICAL MAKEUP 3 (CHANGING IMAGES)

Level: Advanced

Theme: Special Effects/Services

Prerequisite: COS2190 Theatrical Makeup 2 (Planning the Images)
COS1080 Theatrical Makeup 1 (Basic Principles)
COS1010 Personal Images

Description: Students identify materials and describe procedures used to construct and apply two- and three-dimensional makeup and prostheses, analyze images of characters and design, and plan and apply theatrical makeup to recreate images of characters.

General Outcomes: *The student will:*

- identify and describe materials and processes used to construct and apply three-dimensional makeup and prostheses
- design and execute plans to change body images of self and/or others by using theatrical makeup, two- and three-dimensional makeup materials and hair goods
- maintain a portfolio of designs created, including details about makeup, prostheses and hair goods used
- demonstrate basic competencies.

COURSE COS3250: THEATRICAL MAKEUP 4 (CLIENT SERVICES)

Level: Advanced

Theme: Special Effects/Services

Prerequisite: COS3240 Theatrical Makeup 3 (Changing Images)
COS2190 Theatrical Makeup 2 (Planning the Images)
COS1080 Theatrical Makeup 1 (Basic Principles)
COS1010 Personal Images

Description: Students provide a client or client group with the theatrical makeup services to create images that are appropriate to different lighting and portrayal conditions.

General Outcomes: *The student will:*

- consult with and assist in providing theatrical makeup services to a client or client group to enhance and to change body images with the aid of two- and three-dimensional makeup and hair goods
- demonstrate basic competencies.

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COURSE COS3260: FACIAL & BODY ADORNMENT

Level: Advanced

Theme: Special Effects/Services

Prerequisite: COS1010 Personal Images

Description: Students identify adornments available to enhance or change appearances, describe effects of different adornments, demonstrate safe and sanitary service procedures, and explore alternative forms of body adornment.

General Outcomes: *The student will:*

- identify and describe current fashion trends and fads in facial and body adornment and their purpose
- describe safe and sanitary facial and body adornment procedures; e.g.:
  - attaching/removing false eyelashes
  - colouring eyebrows and lashes
- demonstrate basic competencies.

COURSE COS3270: CREATIVE COSMETOLOGY

Level: Advanced

Theme: Enterprise and Competition

Prerequisite: COS1070 Manicuring 1
COS1060 Skin Care 1 (Basic Practices)
COS1040 Forming & Finishing 1
COS1020 Hair Graphics 1
COS1010 Personal Images

Description: Students describe current cosmetology-related fashions, fads and trends, and apply design principles to create skin, hair and nail stylings that may become fads or trends.

General Outcomes: *The student will:*

- produce worksheets that describe:
  - current fashion, fads or trends for hair, nail and facial stylings
  - procedures to create each styling
- reproduce each styling, using appropriate resources
- apply design principles to:
  - develop worksheets for creative and innovative hair, makeup and nail stylings
  - produce each styling, using the worksheets as guides
- demonstrate basic competencies.

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COURSE COS3280: SALES & SERVICE 2 (EFFECTIVENESS)

Level: Advanced

Theme: Enterprise and Competition

Prerequisite: COS2210 Sales & Service 1 (Principles & Practices)
COS1010 Personal Images

Description: Students distinguish between sales and service techniques that encourage positive client responses and those that evoke negative responses, demonstrate effective sales and service techniques, and identify and demonstrate duties performed by salon receptionists.

General Outcomes: *The student will:*

- design a client survey and develop a client profile that identifies client demographics and level of satisfaction with the salon
- develop and implement a plan to enhance client satisfaction and increase the sale of services and cosmetics and products for personal grooming, and evaluate outcomes of the plan
- demonstrate basic competencies.

COURSE COS3290: COMPETITION COSMETOLOGY

Level: Advanced

Theme: Enterprise and Competition

Prerequisite: COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1020 Hair Graphics 1
COS1010 Personal Images

Description: Students identify opportunities to participate in competitions relating to cosmetology, describe the qualities needed to be competitive and the judging systems used at various levels of competitions, and demonstrate ability to be competitive in one or more areas of cosmetology.

General Outcomes: *The student will:*

- identify and describe qualities of a successful competition cosmetologist and methods used to judge competitions
- demonstrate qualities consistent with being a competition cosmetologist
- demonstrate competition standard artistry in one or more cosmetology-related area(s)
- demonstrate basic competencies.

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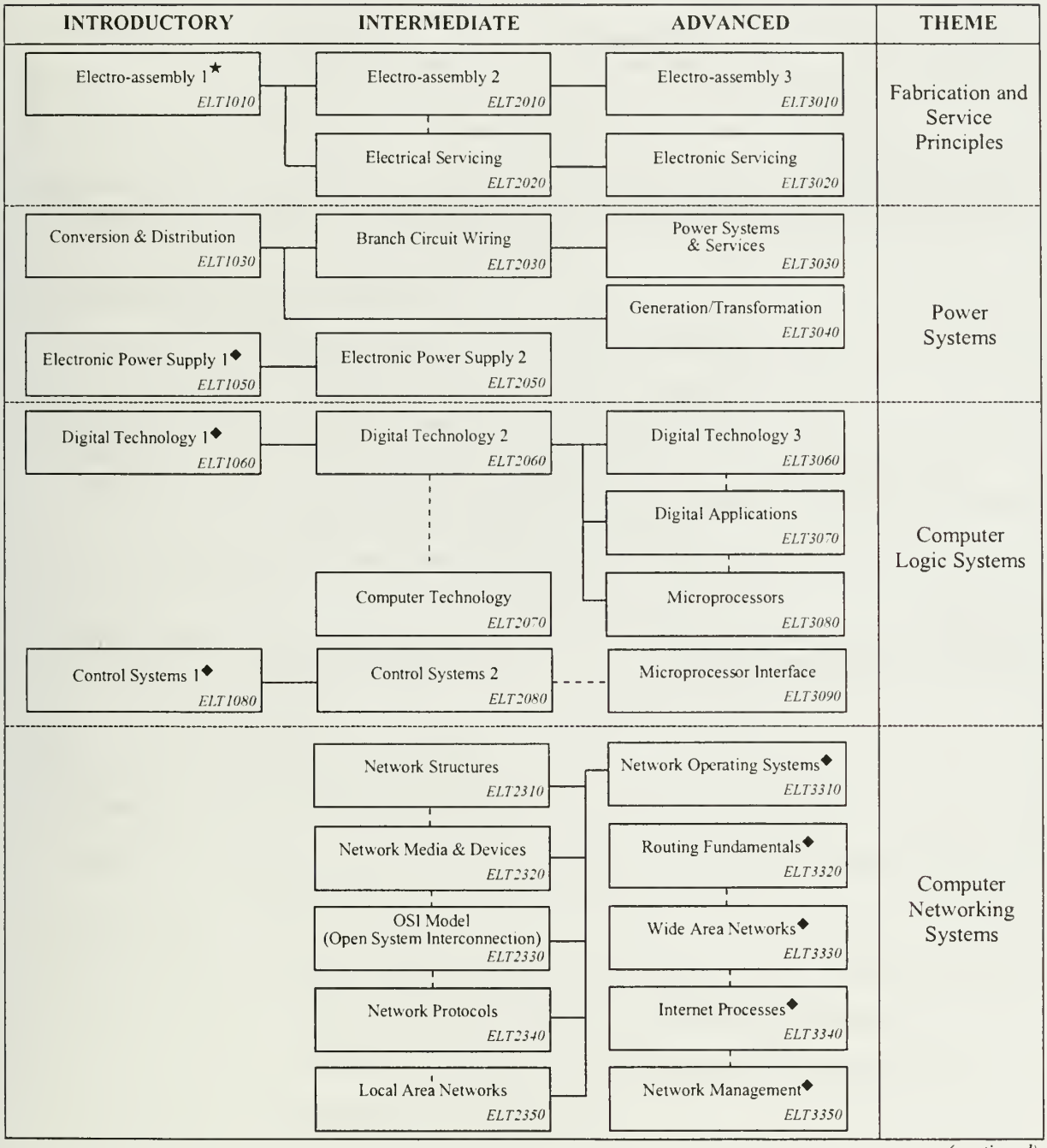
SCOPE AND SEQUENCE



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——— Prerequisite - - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

◆ Refer to specific courses for additional prerequisites.

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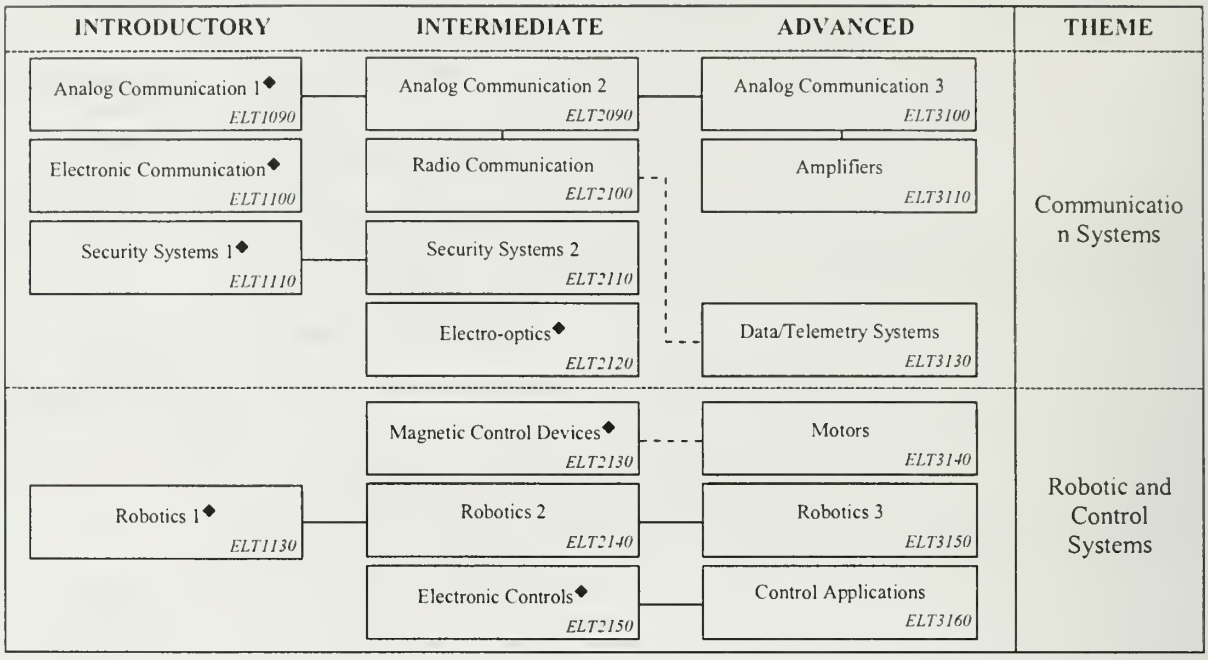
SCOPE AND SEQUENCE (continued)



——— Prerequisite - - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

◆ Refer to specific courses for additional prerequisites.

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COURSE ELT3060: DIGITAL TECHNOLOGY 3

Level: Advanced

Theme: Computer Logic Systems

Prerequisite: ELT2060 Digital Technology 2

Description: Students demonstrate knowledge of digital principles by using medium-scale transistor–transistor logic (TTL) and complementary metal oxide semiconductor (CMOS) integrated technology.

General Outcomes: *The student will:*

- identify, interface and experiment with medium-scale integrated circuit (IC) families
- identify components, construct a prototype and experiment with typical medium-scale logic networks
- demonstrate established laboratory procedures and safe work practices
- create a profile of a trade or occupation within the field of digital technology
- demonstrate basic competencies.

COURSE ELT3070: DIGITAL APPLICATIONS

Level: Advanced

Theme: Computer Logic Systems

Prerequisite: ELT2060 Digital Technology 2

Description: Students experiment with large-scale and very large-scale integrated circuits, and demonstrate their applications to practical situations.

General Outcomes: *The student will:*

- identify applications and develop prototypes of large-scale integrated circuits
- troubleshoot a digital system or prototype with digital equipment
- demonstrate established laboratory procedures and safe work practices
- demonstrate basic competencies.

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COURSE ELT3080: MICROPROCESSORS

Level: Advanced

Theme: Computer Logic Systems

Prerequisite: ELT2060 Digital Technology 2

Description: Students compare the internal architecture of microprocessors and program them, using instruction sets.

General Outcomes: *The student will:*

- compare the internal architecture of various families of microprocessors
- program a microprocessor, using instruction sets
- describe input/output operations in microprocessors
- demonstrate established laboratory procedures and safe work practices
- demonstrate basic competencies.

COURSE ELT3090: MICROPROCESSOR INTERFACE

Level: Advanced

Theme: Computer Logic Systems

Prerequisite: ELT3080 Microprocessors

Description: Students demonstrate how to interface microprocessors/microcontrollers with real-world applications.

General Outcomes: *The student will:*

- describe microprocessor interface output and input circuits
- explain the operation of a serial interface device
- interface a digital-to-analog (D/A) and analog-to-digital (A/D) converter to a microprocessor
- connect a microprocessor to a sensor device used in home, industrial and/or transportation applications
- demonstrate established laboratory procedures and safe work practices
- demonstrate basic competencies.

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GENERAL OUTCOMES: INTERMEDIATE LEVEL

COURSE INF2010: WORKSTATION OPERATIONS

Level: Intermediate

Theme: System Operations

Prerequisite: None

Description: Students learn computer workstation operations, including computer architecture, peripherals, configurations, operating system environments and platforms, utility software, diagnostic and protection software, hard drive file updating and maintenance, support resource application and troubleshooting activities.

General Outcomes: *The student will:*

- use file management procedures efficiently
- install and use software to support the integrity of workstation hardware
- configure and maintain workstation hardware
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF2030: KEYBOARDING 2

Level: Intermediate

Theme: Text/Data Input

Prerequisite: None

Description: Students enhance their personal use keyboarding competencies by increasing the rate of accurate touch keystroking of the alphabetic, numeric and selected punctuation keys.

General Outcomes: *The student will:*

- demonstrate keyboarding competence:
  - at 30 words per minute (wpm)
  - numeric entry at 100 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF2040: KEYBOARDING 3

Level: Intermediate

Theme: Text/Data Input

Prerequisite: None

Description: Students enhance their keyboarding competencies, by increasing the rate of accurate touch keystroking of alphabetic, numeric and all punctuation keys to support personal use and limited, entry-level, workplace opportunities.

General Outcomes: *The student will:*

- demonstrate keyboarding competence:
  - text entry at 40 words per minute (wpm)
  - numeric entry at 120 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF2050: WORD PROCESSING 2

Level: Intermediate

Theme: Productivity Software

Prerequisite: INF1020 Keyboarding 1 (or higher level keyboarding course)
INF1030 Word Processing 1

Description: Students expand their skills in using word processing software commands and functions to produce mailable reports and correspondence, including letters, memorandums and tables, all from rough draft copy.

General Outcomes: *The student will:*

- demonstrate correct use of word processing software functions by producing mailable, well-formatted:
  - paginated reports, with headers, footers and title pages
  - letters with special notations in a designated letter style
  - memorandums
  - multicolumn tables with borders and footnotes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF2060: ELECTRONIC PUBLISHING 1

Level: Intermediate

Theme: Productivity Software

Prerequisite: INF1030 Word Processing 1

Description: Students develop skill, using electronic/desktop publishing software to create a variety of camera-ready documents.

General Outcomes: *The student will:*

- demonstrate basic electronic publishing software competence, by using page make-up tools and commands to produce camera-ready publications
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF2070: DATABASE 2

Level: Intermediate

Theme: Productivity Software

Prerequisite: INF1050 Database 1

Description: Students use all the commands and functions of electronic database software that support effective and efficient database applications.

General Outcomes: *The student will:*

- demonstrate advanced level electronic database software competence, by:
  - creating hierarchical and relational databases
  - importing and manipulating data and preparing reports
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF2080: SPREADSHEET 2

Level: Intermediate

Theme: Productivity Software

Prerequisite: INF1060 Spreadsheet 1

Description: Students demonstrate advanced level spreadsheet commands and functions to calculate and manipulate data and to prepare appropriate reports and printouts in text and graphic format.

General Outcomes: *The student will:*

- demonstrate advanced level electronic spreadsheet software competence, by:
  - creating spreadsheets, including importing data
  - manipulating data and preparing charts
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF2090: CORRESPONDENCE

Level: Intermediate

Theme: Applied Processing

Prerequisite: INF2030 Keyboarding 2 (or higher level keyboarding course)
INF2050 Word Processing 2

Description: Students expand their rate of document production as they prepare various forms of correspondence in mailable form, using word processing software.

General Outcomes: *The student will:*

- demonstrate efficient word processing of correspondence through the production of:
  - mailable correspondence in a variety of formats under time constraints
  - error-free, well-formatted correspondence
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF2100: REPORTS

Level: Intermediate

Theme: Applied Processing

Prerequisite: INF2030 Keyboarding 2 (or higher level keyboarding course)
INF2050 Word Processing 2

Description: Students expand their rate of production as they prepare various reports and manuscripts in mailable form.

General Outcomes: *The student will:*

- demonstrate efficient word processing of reports/manuscripts through the production of:
  - mailable reports in a variety of formats under time constraints
  - error-free, well-formatted reports
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF2110: TABLES/FORMS

Level: Intermediate

Theme: Applied Processing

Prerequisite: INF2030 Keyboarding 2 (or higher level keyboarding course)
INF2050 Word Processing 2

Description: Students expand their rate of document production as they prepare various tables/forms in mailable form.

General Outcomes: *The student will:*

- demonstrate competence in word processing of tables/forms, by:
  - producing mailable tables in a variety of formats under time constraints
  - designing a mailable form for a specific purpose and audience
  - editing and formatting tables and forms
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF2120: SOFTWARE INTEGRATION 1

Level: Intermediate

Theme: Applied Processing

Prerequisite: INF1020 Keyboarding 1 (or higher level keyboarding course)
INF1030 Word Processing 1
INF1050 Database 1
INF1060 Spreadsheet 1

Description: Students develop document production skills requiring the integration of data, text and graphics.

General Outcomes: *The student will:*

- demonstrate word processing and data management systems/graphics software integration competence, by:
  - producing mailable word processing documents that integrate spreadsheet, database and/or graphics in a variety of specific applications
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF2130: MULTIMEDIA AUTHORING 1

Level: Intermediate

Theme: Productivity Software

Prerequisite: INF1070 Hypermedia Tools

Description: Students are introduced to multimedia software and provided with an opportunity to develop basic authoring competence, by accessing and integrating software resident text, video and audio clips.

General Outcomes: *The student will:*

- demonstrate multimedia authoring competence, by using software resident text, video and audio clips to:
  - use software-specific commands to access and manipulate text video and audio
  - develop a multimedia presentation
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF3050: KEYBOARDING 6

Level: Advanced

Theme: Text/Data Input

Prerequisite: None

Description: Students enhance their occupational-level keyboarding competence of all keystroke functions, using unedited, edited and straight copy material.

General Outcomes: *The student will:*

- demonstrate proficient keyboarding competence:
  - text entry at 70 words per minute (wpm)
  - numeric entry at 200 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF3060: WORD PROCESSING 3

Level: Advanced

Theme: Productivity Software

Prerequisite: INF2030 Keyboarding 2 (or higher level keyboarding course)
INF2050 Word Processing 2

Description: Students develop occupational-level competence in the use of word processing software commands and functions to produce mailable reports, correspondence and tables, including the importing and merging of text, data and graphics.

General Outcomes: *The student will:*

- demonstrate correct use of word processing software functions, by producing mailable, properly formatted copy of:
  - a multipage report with a title page, table of contents, bibliography and appendices
  - two-page letters in designated letter styles that incorporate special formats
  - memorandums
  - tables
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF3070: ELECTRONIC PUBLISHING 2

Level: Advanced

Theme: Productivity Software

Prerequisite: INF2060 Electronic Publishing 1

Description: Students use the functions and commands of electronic/desktop publishing software as they integrate text composing, editing, typesetting, graphics generation and page layout functions to create customized, professional, quality documents.

General Outcomes: *The student will:*

- demonstrate electronic publishing software competence, by:
  - creating a customized document effectively incorporating text and graphics to communicate an idea or activity
  - applying software make-up tools and commands
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF3080: INFORMATION MANAGEMENT TOOLS

Level: Advanced

Theme: Productivity Software

Prerequisite: None

Description: Students develop competence in using information management systems software, such as project management, schedules and planners for either personal or workplace applications.

General Outcomes: *The student will:*

- demonstrate the ability to use information management software, to:
  - plan projects, including setting goals, timelines and determining resource needs
  - monitor projects, including time and resource management
  - adjust project files, as appropriate
  - prepare project reports
- describe the features of the information management software used
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF3090: SOFTWARE INTEGRATION 3

Level: Advanced

Theme: Applied Processing

Prerequisite: INF2120 Software Integration 1

Description: Students develop high production rates as they process documents from unedited and unformatted copy, using numerous functions/commands to create, revise, format and print a wide range of mailable copy.

General Outcomes: *The student will:*

- demonstrate competence in producing multipage documents and presentations that integrate word processing, spreadsheet, database and graphics files/documents, from:
  - unedited copy
  - unformatted copy
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF3100: SPECIALIZATION 1

Level: Advanced

Theme: Applied Processing

Prerequisite: INF2030 Keyboarding 2 (or higher level keyboarding course)
INF2050 Word Processing 2
INF2120 Software Integration 1

Description: Students specialize in document preparation, terminology application and associated office routine expectations in a specific focus area, such as a medical, legal, petroleum, real estate, insurance, travel/tourism, forestry or agricultural environment.

General Outcomes: *The student will:*

- demonstrate basic competence in a specific focus area, by:
  - using appropriate terminology
  - preparing and producing documents
  - exhibiting professional attributes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE INF3110: SPECIALIZATION 2

Level: Advanced

Theme: Applied Processing

Prerequisite: INF3100 Specialization 1
INF3120 Software Integration 2

Description: Students develop workplace competence in a specific focus area, such as medical, legal, petroleum, real estate, insurance, travel/tourism, forestry or agricultural environment, by creating and completing appropriate documents that employ specialized communication skills and conform to workplace expectations and time constraints.

General Outcomes: *The student will:*

- demonstrate entry-level workplace competence in a specific focus area, by:
  - using appropriate terminology
  - preparing and producing documents
  - exhibiting professional attributes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

COURSE INF3120: SOFTWARE INTEGRATION 2

Level: Advanced

Theme: Applied Processing

Prerequisite: INF2120 Software Integration 1

Description: Students expand their document production skills to workplace standards. Documents could require the importing and integration of word processing, spreadsheet, graphics and database files.

General Outcomes: *The student will:*

- demonstrate competence in producing documents that integrate word processing, spreadsheet, database and graphics files/documents, from:
  - unedited copy
  - unformatted copy
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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MANAGEMENT AND MARKETING

B. STRAND RATIONALE AND PHILOSOPHY

In our highly competitive, rapidly changing society, management and marketing are generic skills. No matter what you do, how you manage yourself or how you use the resources available to you; you market yourself, your services or the products you make.

Management and Marketing, a strand in Career and Technology Studies, is designed to increase students' abilities to apply effective and efficient systems and strategies of management and marketing within personal, family, workplace, community and global contexts. The management aspect of this strand identifies effective procedures for organizing resources and working with people; whereas, marketing is concerned with pricing, promotion and distribution of ideas, products and services to satisfy consumer needs and wants.

Marketing in this strand takes a retail perspective. Linking student experiences as consumers to marketing in the retail marketplace is a central focus in the marketing systems and strategies theme. Through consumer experiences and simulations, students will investigate various marketing strategies and technologies, including face-to-face approaches, various forms of media and e-commerce, through the eyes of a retail worker, manager or owner. Students will learn retail merchandising strategies that help people engaged in marketing meet the challenge of ensuring that the right goods or services are in the right place, at the right time, in the right quantity, at the right price and offered to the right people.

Management in this strand emphasizes business and information management to generate profit within a competitive environment. Knowledge, skills and attitudes will be developed to help students identify and analyze strategies to succeed when working within continuously changing systems. Students will gain experience and confidence through a wide range of practical experiences as they plan, organize, take action, lead, work cooperatively, monitor progress and communicate. Their goal will be to ensure quality and professional service.

This strand provides an opportunity for students to explore the very complex and continuously expanding study of management and marketing systems and strategies. The intent is to help students develop enough background and skills so that, as entry-level employees, they can make an effective contribution right away. Many of the systems and strategies introduced here lead to further learning and specialization, both through workplace experiences and/or post-secondary study.

Management and Marketing builds on the Enterprise and Innovation strand competencies. Learning experiences will help students relate

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what they already know about how organizations run, how goods are sold and how the economy works. Management and Marketing can help students become aware of and assess a wide range of career opportunities—opportunities in small, medium and large public or private organizations as management and marketing specialists, in related support positions, or as a complement to the technical skills required by people who own and manage their own businesses.

Within the philosophy of Career and Technology Studies, *students* in Management and Marketing *will*:

- identify, analyze, apply and improve systems and strategies related to business and information management and marketing that can be applied personally, throughout CTS and in other study areas
- develop abilities in planning, organizing, leading, monitoring and communicating
- research, analyze, interpret and evaluate information needed in business management, marketing and information management systems and strategies
- develop and apply creative problem-solving and effective decision-making skills within the contexts of business management, marketing and information management systems and strategies
- analyze the role of the individual, family and community as they relate to management and marketing within the Canadian and global economy
- identify areas of interest and talent and relate these to career opportunities in business management and marketing
- demonstrate effort to develop basic competencies.

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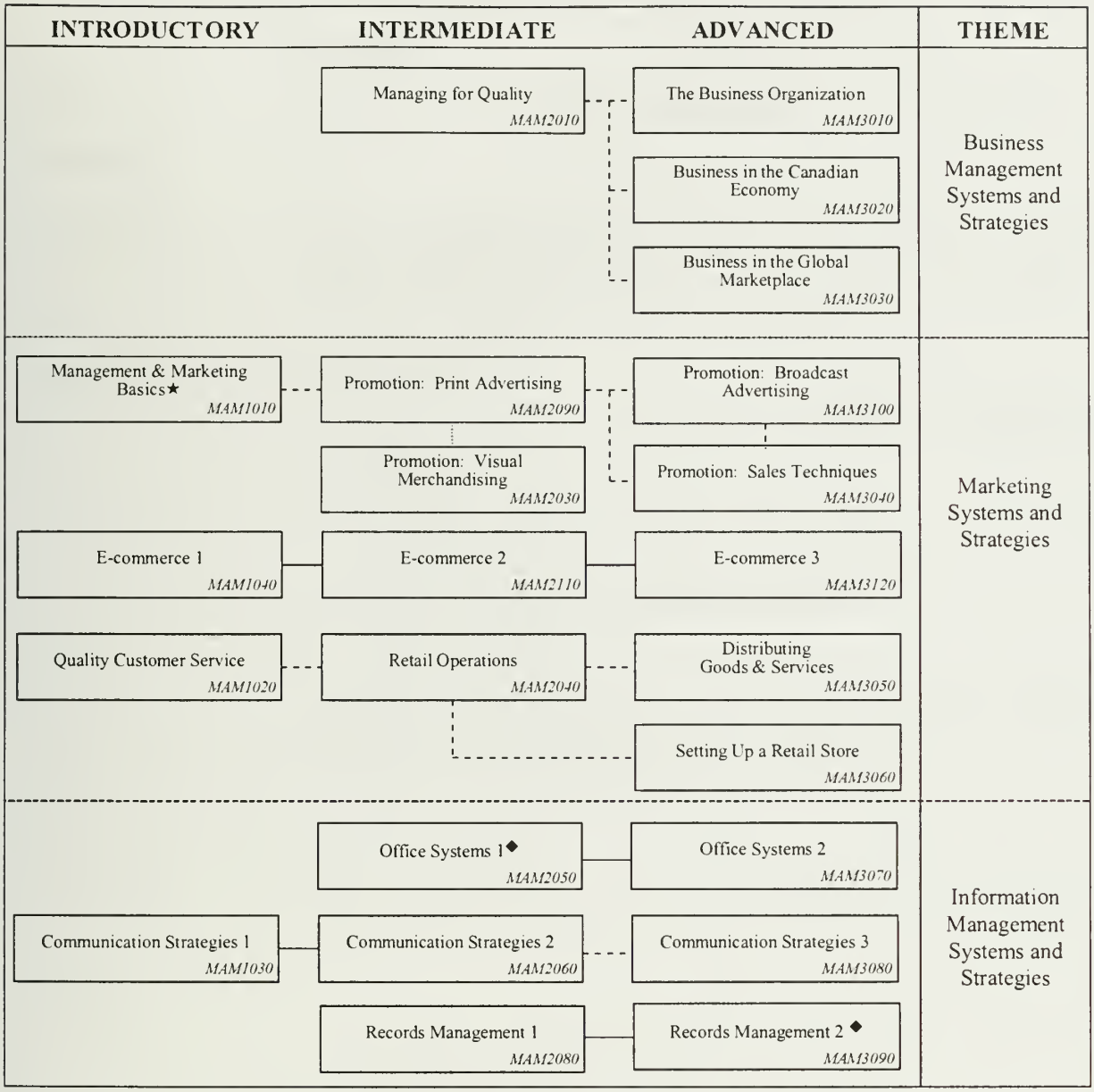
SCOPE AND SEQUENCE



——— Prerequisite - - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

◆ Refer to specific courses for additional prerequisites.

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COURSE MAM1030: COMMUNICATION STRATEGIES 1

Level: Introductory

Theme: Information Management Systems and Strategies

Prerequisite: None

Description: Students improve oral and written business communication skills necessary for efficient and effective management of information. The focus is on business writing strategies and composing at the computer when preparing memorandums, e-mail messages and business letters.

General Outcomes: *The student will:*

- demonstrate use of the writing process when composing correspondence, including:
  - prewriting
  - writing
  - revising
  - proofreading
- demonstrate appropriate ways to deal with callers:
  - face to face
  - on the telephone
- identify personal interests and opportunities as they relate to applying effective communication strategies in career areas
- demonstrate basic competencies.

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COURSE MAM1040: E-COMMERCE 1

Level: Introductory

Theme: Marketing Systems and Strategies

Prerequisite: None

Description: Students will investigate the concept of e-commerce as a marketing strategy and design an e-commerce Web site to sell products/services.

Note: The e-commerce Web site that is designed may or may not be made operational.

General Outcomes: *The student will:*

- describe features, benefits and challenges influencing decisions to market online
- outline the process of building an e-commerce Web site
- analyze features of effective e-commerce Web sites
- design an e-commerce Web site to market products or services online
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE MAM2080: RECORDS MANAGEMENT 1

Level: Intermediate

Theme: Information Management Systems and Strategies

Prerequisite: None

Description: Students demonstrate basic records management skills for a manual records system, emphasizing alphabetic coding procedures.

General Outcomes: *The student will:*

- identify and describe basic filing/records management concepts
- demonstrate ability to organize and use an alphabetic filing/records management system
- identify personal interests and opportunities as they relate to careers in records management
- demonstrate basic competencies.

COURSE MAM2090: PROMOTION: PRINT ADVERTISING

Level: Intermediate

Theme: Marketing Systems and Strategies

Prerequisite: None

Description: Students are introduced to communication channels, delivery strategies and advertising media that can be used to inform potential customers about products and services available in the marketplace.

General Outcomes: *The student will:*

- describe principles involved in the advertising process and apply these principles to print media
- evaluate print advertisements
- design and create an effective print advertisement
- identify personal interests and opportunities as they relate to careers in advertising
- demonstrate basic competencies.

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COURSE MAM2110: E-COMMERCE 2

Level: Intermediate

Theme: Marketing Systems and Strategies

Prerequisite: MAM1040 E-commerce 1

Description: Students will enhance their understanding of e-commerce as a marketing strategy and design an e-commerce Web site with special effects and additional content to attract customers and increase their satisfaction.

General Outcomes: *The student will:*

- describe strategies that attract customers to an e-commerce Web site
- describe ethical issues, security threats and current legislation related to e-commerce
- analyze features of effective e-commerce Web sites
- design an e-commerce Web site with special effects and additional content
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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COURSE MAM3080: COMMUNICATION STRATEGIES 3

Level: Advanced

Theme: Information Management Systems and Strategies

Prerequisite: None

Description: Students continue to improve basic oral and written communication strategies necessary to efficient and effective management of information. Focus is on technical writing strategies and composing at the computer when preparing formal business reports and proposals.

General Outcomes: *The student will:*

- critique formal technical reports
- prepare a formal technical report that is clear, concise and meets the needs of the report user
- deliver an oral, formal technical report supported by visual aids
- demonstrate basic competencies.

COURSE MAM3090: RECORDS MANAGEMENT 2

Level: Advanced

Theme: Information Management Systems and Strategies

Prerequisite: MAM2080 Records Management 1
INF1050 Database 1 [Information Processing Strand]

Description: Students describe the advantages of an automated records system. Numeric, subject and geographic coding are emphasized.

General Outcomes: *The student will:*

- identify and describe basic electronic records management concepts
- demonstrate ability to plan, create and use two of the following electronic records management systems:
  - numeric
  - subject
  - geographic
- demonstrate basic competencies.

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COURSE MAM3100: PROMOTION: BROADCAST ADVERTISING

Level: Advanced

Theme: Marketing Systems and Strategies

Prerequisite: None

Description: Students are introduced to broadcast communication channels, delivery strategies and advertising media that can be used to inform potential customers about products and services available in the marketplace.

General Outcomes: *The student will:*

- investigate and report on basic broadcast media types and concepts
- evaluate advertisements for radio and television mediums
- design and create an effective promotional advertisement for each of the following media:
  - television
  - radio
- demonstrate basic competencies.

COURSE MAM3120: E-COMMERCE 3

Level: Advanced

Theme: Marketing Systems and Strategies

Prerequisite: MAM2110 E-commerce 2

Description: Students will investigate strategies to gather customer information and design e-commerce Web sites that take advantage of technological advances.

General Outcomes: *The student will:*

- research the challenges of obtaining customer information
- research financial considerations when developing and maintaining an e-commerce Web site
- analyze features of effective e-commerce Web sites
- design two or more e-commerce Web sites that obtain customer information
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

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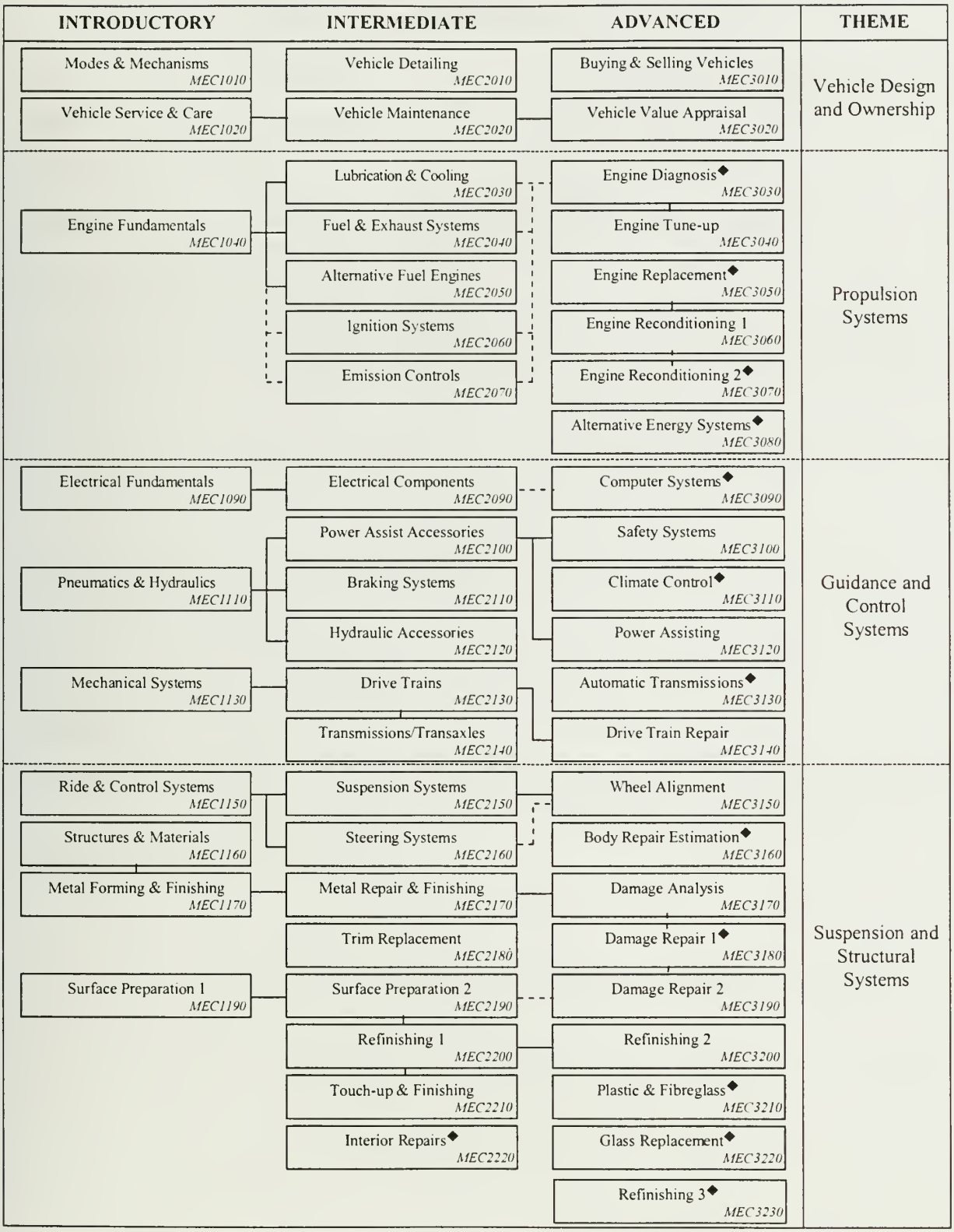
SCOPE AND SEQUENCE



——— Prerequisite - - - - - Recommended sequence

◆Refer to specific courses for additional prerequisites.

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COURSE MEC2050: ALTERNATIVE FUEL ENGINES

Level: Intermediate

Theme: Propulsion Systems

Prerequisite: None

Description: Students determine alternative fuels used to power motor vehicles.

General Outcomes: *The student will:*

- demonstrate safe work practices when working with alternative fuel vehicles
- determine the type of fuel that is best suited to a particular use and type of vehicle
- service an alternative fuel vehicle, recognizing its unique maintenance requirements
- demonstrate basic competencies.

COURSE MEC2060: IGNITION SYSTEMS

Level: Intermediate

Theme: Propulsion Systems

Prerequisite: None

Description: Students identify the basic components and parts of ignition systems used on internal combustion engines, and service and repair an ignition system.

General Outcomes: *The student will:*

- follow electrical safety guidelines, by accurately interpreting and using instruction manuals
- explain how a timed high voltage spark is achieved in magneto, point and electronic ignition systems
- recognize the drivability symptoms, and use visual and instrument checks to diagnose ignition system faults
- service and repair an ignition system
- demonstrate basic competencies.

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COURSE MEC2070: EMISSION CONTROLS

Level: Intermediate

Theme: Propulsion Systems

Prerequisite: None

Description: Students describe the importance of controlling emissions and the technology applied to vehicles to meet prescribed standards.

General Outcomes: *The student will:*

- demonstrate safe work practices when working with emission control systems
- list and describe vehicle pollutants and their effects on the environment
- describe types and characteristics of pre- and post-combustion emission systems
- identify emission control components
- diagnose and service emission control systems
- demonstrate basic competencies.

COURSE MEC2090: ELECTRICAL COMPONENTS

Level: Intermediate

Theme: Guidance and Control Systems

Prerequisite: MEC1090 Electrical Fundamentals

Description: Students identify and describe the basic use and testing of the electrical components of a typical motor vehicle.

General Outcomes: *The student will:*

- demonstrate safe work practices when working with electrical components
- describe the function and operation of a vehicle's electrical systems and components
- identify electrical faults, by using standard diagnostic and testing procedures
- test and service electrical components
- demonstrate basic competencies.

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